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ABSTRACT

This guide provides clear, graphic step-by-step instructions to introducing Braille 'n Speak technology to students with visual impairments. Braille 'n Speak is a notebook computer for individuals with visual impairments. Individuals input text using Braille keys and get speech feedback. The guide is intended to help classroom teachers with limited knowledge of Braille to assist students with visual impairments if problems arise when the Vision Resource Teacher is unavailable. Information is provided on: (1) braille key numbering; (2) troubleshooting; (3) speech parameters; (4) how to get to the file menu; (5) creating a file; (6) navigational keyboard wall charts; (7) selecting a reading method; (8) movement within a document; (9) how to find text within the file; (10) editing a document; (11) pasting from clipboard; (12) automatic page numbering; (13) printing text; (14) setting page format parameters; (15) renaming an open file or another file; (16) deleting files; (17) expanding a file: (18) help file; (19) protecting files; (20) calculator; (21) stopwatch function; (22) time and date function; (23) use of disk drive and disk drive commands; (24) spell checker; (25) status menu; and (26) creating macros. An appendix includes the braille alphabet, nemeth code numbers, and the international phonetic alphabet. (CR)

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# Braille 'n Speak: A Public Domain Document To Assist Teachers

G. Cook

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## A User Friendly Guide

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EC 306635

# Introduction

## Braille 'n Speak:
## A Public Domain Document To Assist Teachers

Material developed and synthesized by Graham Cook, Itinerant Resource Teacher for the Visually Impaired, School District #59 [Peace River South] based on Blazie Engineering's Guide 'Getting Started: A Teacher's Guide to Braille 'n Speak' by Bryan J. Blazie. A special thank you to Dave Manzer of S.E.T. B.C. for proof reading this document.

**Jan. 25th 1994**
Public domain material

**Note:** This guide is not a complete manual on the Braille 'n Speak but it provides a comprehensive introduction.

Technical manuals that accompany 'state of the art technology' can often be intimidating and overwhelming to the reader. With the added complexity of incorporating braille this material becomes even more challenging. The purpose of this manual is to provide a clear graphic step by step guide, to assist people who are introducing the Braille and Speak technology to visually impaired individuals. A classroom teacher with a limited knowledge of braille can understand these pictoral diagrams and can assist his/her student if problems occur when the Teacher for the Visually Impaired is absent.

Any corrections, contributions and comments please call:

Graham Cook (604) 782-8000

# Table of Contents


Introduction ..... page 1

Table of Contents ..... page 2

General Information ..... page 4

Braille Key Numbering/What are Chords ..... page 6

When Your Braille 'n Speak Does Not Work or Acts Up! ..... page 7

Setting Speech Parameters ..... page 9

How to get to the File Menu / File Menu Commands ..... page 13

Creating a File ..... page 15

Navigation Keyboard Wall Charts ..... page 17

Selecting a Reading Method ..... page 22

Movement Within a Document ..... page 23

How to Find Text Within the File ..... page 27

Editing a Document (Inserting and Deleting) ..... page 29

Paste from Clipboard ..... page 36

Automatic Page Numbering ..... page 37

Printing Your Text ..... page 38

Setting Page Format Parameters ..... page 40

Renaming an Open File ..... page 43

Renaming Another File ..... page 44

Deleting an Open File ..... page 45

Deleting Another File ..... page 46

Expanding a File ..... page 47

Help File ..... page 49

Protecting and Unprotecting Files ..... page 50

Calculator ..... page 51

Stopwatch Function ..... page 55

Time Function ..... page 56

Date Function ..... page 57

Use of Disk Drive ..... page 58

Disk Drive Commands ..... page 59

Spell Checker ..... page 61

Status Menu ..... page 64

Creating Macros ..... page 66

## Appendix

Braille Alphabet .....
Appendix A

Nemeth Code Numbers .....
Appendix B

International Phonetic Alphabet .....
Appendix C

# General Information

The Braille 'n Speak is a powerful computer. It provides greater independance to visually impaired individuals, because they are able to input text using Braille keys and benefit from speech feedback. The Braille 'n Speak is very useful if the student's brailling speed is faster than his/her keyboarding skills.

## Braille 'n Speak Special Information

### Recharging the Batteries

Do not charge your Braille 'n Speak for more than 8 hours.

Do not charge your Braille 'n Speak until it says that the batteries are low - "bat low". It is very important for the batteries to drain to 'low' each time. This will dramatically extend the life of the battery. When it says "bat low" you can have your student plug it in for the school day.

### Cold Weather

Do not leave the Braille 'n Speak in a cold environment. For example in a cold car over night (-10 to -50 weather can damage the battery and the floppy disk).

### Bumping and Dropping

The Braille 'n Speak comes with a padded case and can absorb a mild bump but the equipment is fragile and should be treated with respect.

### Valuable

The Braille 'n Speak is approximately **$1800** Canadian and should not be left unattended. Treat it like an expensive camera.

### Headphones

The Braille 'n Speak comes with its own ear phone. These are designed to fit in the ear or rest just over the ear. Be careful that you and your student don't get blasted when adjusting the sound level of your Braille 'n Speak.

If two people wish to listen to Braille 'n Speak through head phones (student and instructor) you can purchase a stereo Y splitter jack and attach two headsets to the one voice output. It is a good idea to buy two quality name brand 'walkman style' stereo head phones. Your Braille 'n Speak is mono but if you have a Macintosh computer the stereo feature will be useful.

# Braille 'n Speak Special Information Continued

### Speaker Attachment

The 'echo' speech synthesizer (speaker) can be attached to the Braille 'n Speak. This is useful for demonstrations or amplifying the sound for students with hearing impairments but it obviously would not be appropriate for classroom situations.

### Saving Material

Braille 'n Speak always saves automatically.

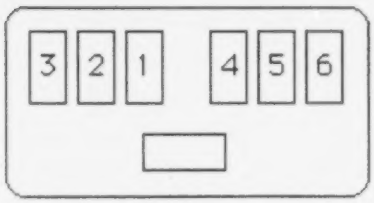
Use the disk drive to backup major assignments or important information.

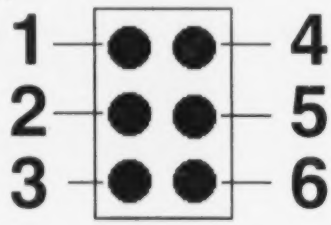
### Spell Checker

You will need a disk drive in order to use a spell checker. Please refer to the 'Spell Checker' section.

# Braille Key Numbering

The keys on the braille keyboard have been assigned the following numbers. The key not numbered is the space bar.



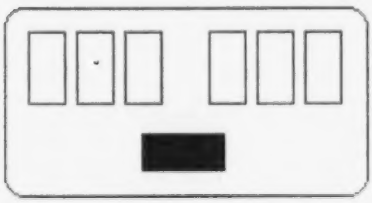




**Braille Cell**

# What are chords?

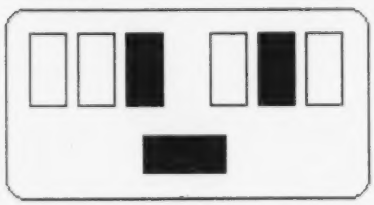
**Chords are created when you hold down the space bar while selecting braille keys.** This provides increased possibilities when creating commands for the Braille 'n Speak.

This key is **used for chording** (a space bar)

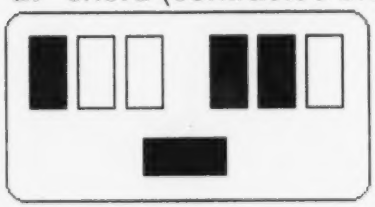


## Braille Chording

**e** chord

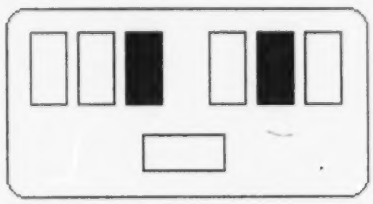


**'ar'** chord (contracted braille)

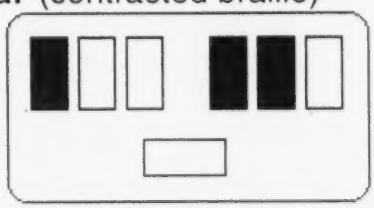


## Regular Braille

**e** (braille letter)



**ar** (contracted braille)



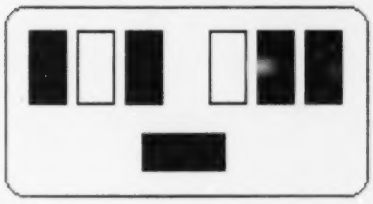
# When Your Braille 'n Speak Does Not Work or Acts Up!

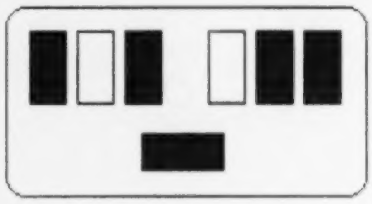
**Resetting your Braille 'n Speak**
If you are experiencing problems with your Braille 'n Speak you can restore the unit to the factory set defaults. Sometimes you might find that the speech level has been set so that it becomes garbled. Resetting the Braille 'n Speak will clear up the problem.

The following four options will resolve the problem. The options listed below are from 'mellow' to 'harsh' depending on the serverity of the problem.

**1.** ***z chords*** To clear up any problems that might occur the first option to try is: (this will not damage any data)

**z** chord (wait three seconds) **z** chord

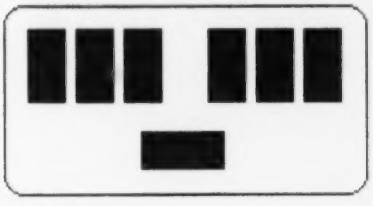




**2.** ***Warm reset*** (Braille 'n Speak on)
Press all the keys down (**for** chord - dots 1, 2, 3, 4, 5, 6 chord) and lift up all fingers up at once (do this twice).

**Note:** Braille 'n Speak will say "warm reset please verify" after the first **for** chord, verify by selecting the **for** chord a second time.

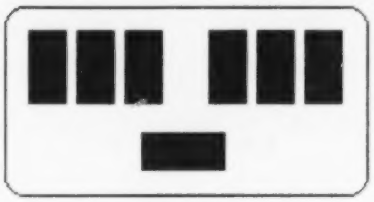
**for** chord (dots 1, 2, 3, 4, 5, 6 chord) do this twice



# When Your Braille 'n Speak Does Not Work or Acts Up! Continued

**3.** ***Cold reset*** (Braille 'n Speak off)
**Turn your Braille 'n Speak off.** Press all the keys down, **turn on** your Braille 'n Speak, wait 2 seconds, and lift up all fingers at once.

**for** chord (dots 1, 2, 3, 4, 5, 6 chord)



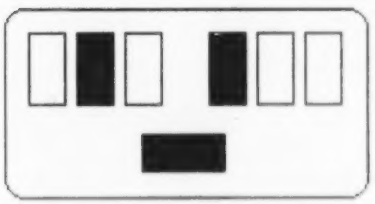
**4.** ***Initializing*** **Your Braille 'n Speak**
**IMPORTANT: BE SURE TO MAKE BACKUPS TO THE DISK DRIVE BEFORE INITIALIZING. INITIALIZING WILL WIPE THE CONTENTS FROM THE BRAILLE 'N SPEAK.**

**Note:** You might wish to keep this information from your client.

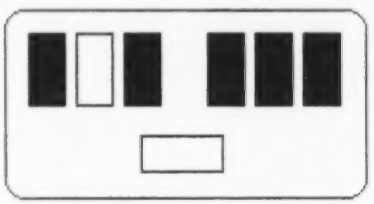
Use **EXTREME CAUTION** with this feature.

Turn Braille 'n Speak off - select an **i** chord while turning on. The Braille 'n Speak will say "system initialization, delete all data file area, enter **y**, or **n**". Select the **y** to reset.

**i** chord = initialize Braille 'n Speak



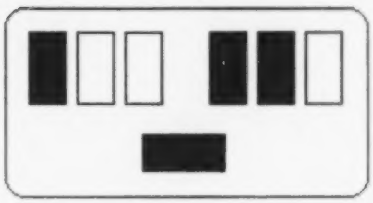
**y** = yes, reset the Braille 'n Speak



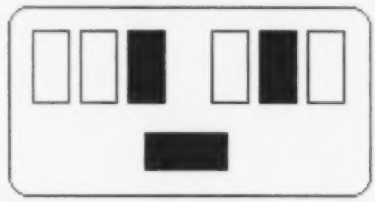
# Setting Speech Parameters

Use the same Speech Parameter commands to open and exit the setting of volume, rate of Speech and Pitch.

**'ar'** chord = open



**e** chord = exit



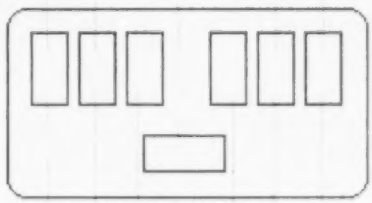
## Volume, Rate of Speech & Pitch

The Volume, Rate & Pitch adjustments are available while in the 'Speech Parameters' mode.

How much to say

**Down** **Up**

Frequency — Frequency



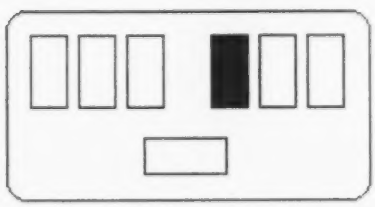
Volume

Rate of Speech

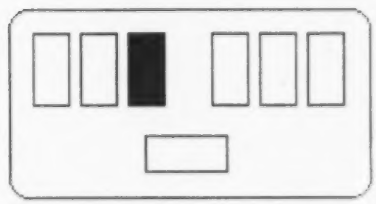
Pitch

## Volume

**dot 4** = "louder" volume



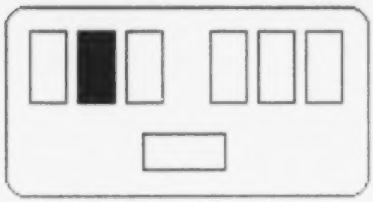
**a** = "softer" volume



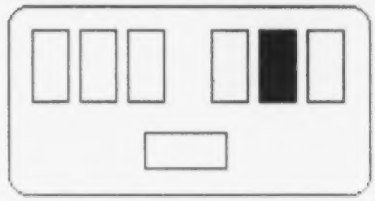
# Volume, Rate of Speech & Pitch Continued

## Rate of Speech

**dot 2** = "slower" rate of speech

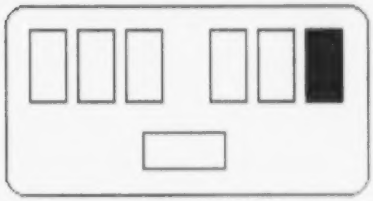


**dot 5** = "faster" rate of speech

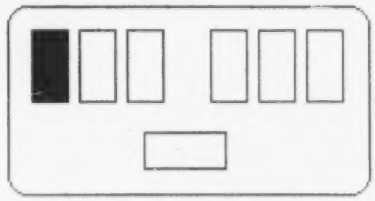


## Pitch

**dot 6** = "higher" rate of pitch

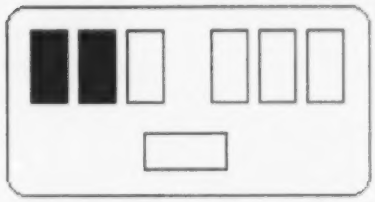


**dot 3** = "lower" rate of pitch

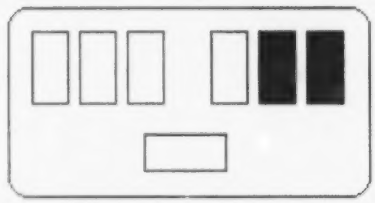


## Frequency

**dot 2,3** = Lower "frequency"

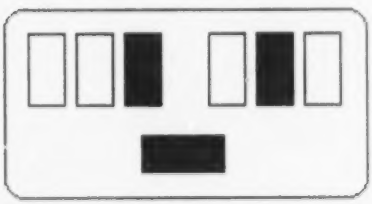


**dot 5,6** = Higher "frequency"



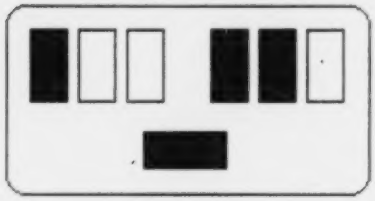
## How to exit from the Speech Parameters Menu

**e** chord = exit

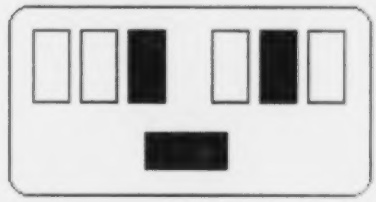


# Setting Speech Parameters Continued

**'ar'** chord = open

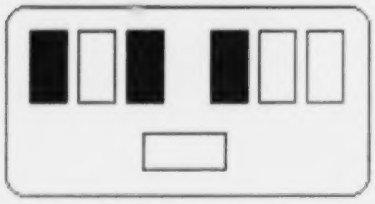


**e** chord = exit

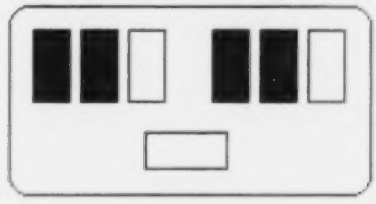


## There are 4 choices of punctuation.

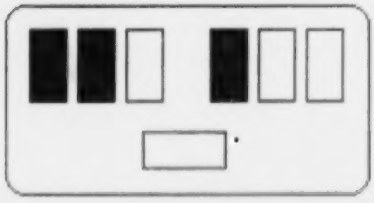
**m** = most punctuation
(not often used)



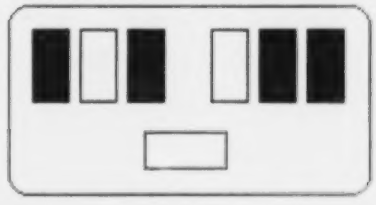
**t** = total punctuation
(rarely used)



**s** = some punctuation
**(most often used)**

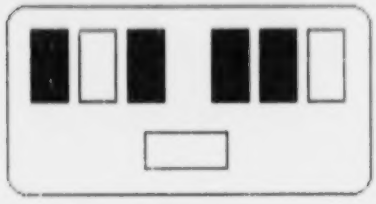


**z** = no punctuation

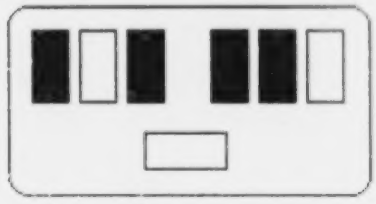


## There are are 2 number settings.

**n** = "say digits" (e.g. 1, 2, 3)



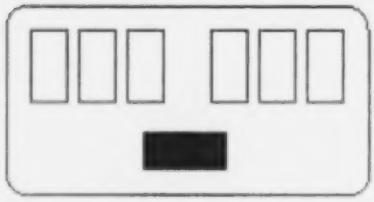
**n** = "say full numbers"
(e.g. one hundred and three)



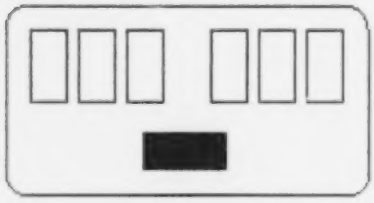
# Setting Speech Parameters Continued

## There are 3 key pad settings

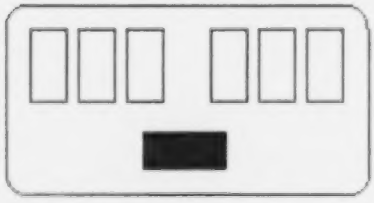
Move between the selections by pressing the space bar.
**space bar** = "key echo on" - speaks everything as you type.
Use this level while **introducing** the Braille 'n Speak.



**space bar** = "key click on" - 'click' while brailling.
For **intermediate/advanced** Braille 'n Speak users.

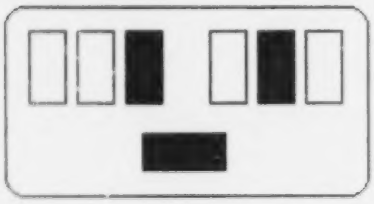


**space bar** = "silent keys" - silent
Some Braille 'n Speak users prefer this mode.



## How to exit from the Speech Parameters Menu

**e chord** = exit



# How to get to the File Menu

**Note:** You are always in a file. If you have not created any files you will start off in the help file.

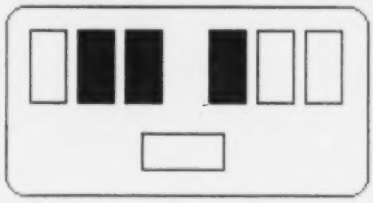
To open the file menu follow these two steps.

## Step #1

**o chord** = "option"

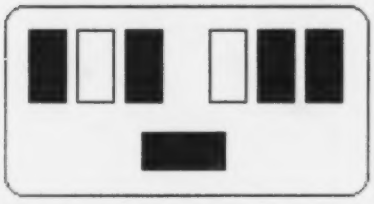
## Step #2

**f** = "enter file command"



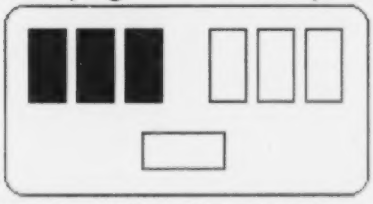
You will now be in the file menu.

If **o** chord does not operate use **z** chord.



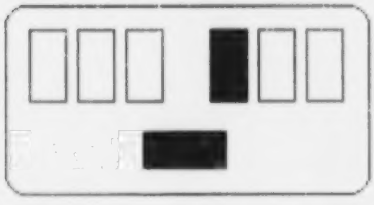
## File Menu Commands (after opening file menu)

**L** = list all files (Material is presented in the following format - file name, # of pages of memory, document or braille file).

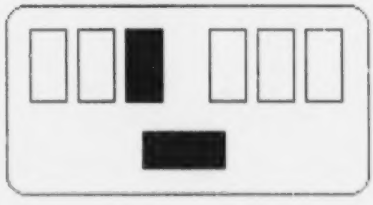


**Note:** Files listed in the order that they were created.

**dot 4** chord = read next file name in list

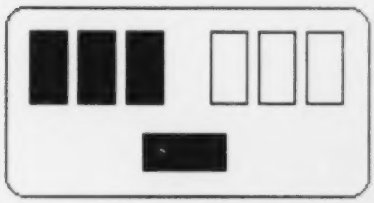


**dot 1** chord = read previous file name in list

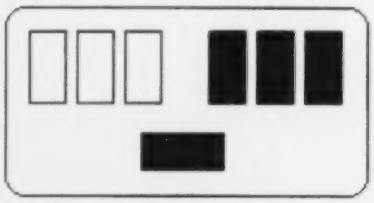


# File Menu Commands Continued

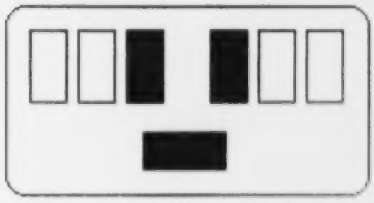
**L** chord = top of list



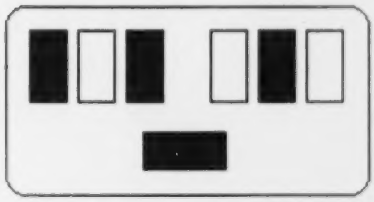
**dot 4,5,6** chord = bottom of list



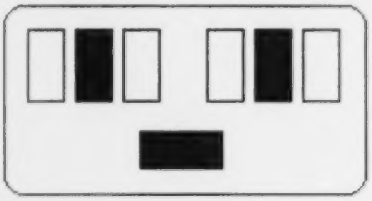
**c** chord = (read name of current file in the list)



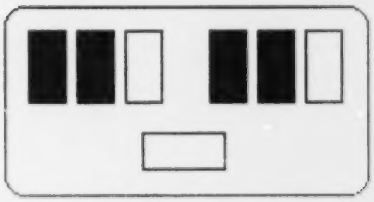
**o** chord = open selected file (current file)
**Note:** To open a specific file you must be on the line of that file in the file menu.



**dot 2, 5** chord = spell file
**e.g.** "File #8, Ron, R-O-N, 2 pages, Braille file"



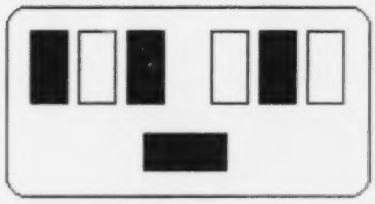
**t** = tell name of currently open file
(The file that you are in when you gave the **o** chord).



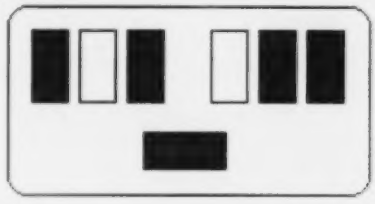
# Creating a file

## Step #1

**o chord** = (go to 'option menu') "option"

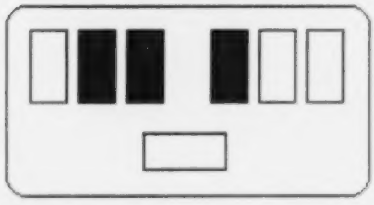


**Note:** If it does not work press **o** chord again and if that fails to work use a **z** chord.



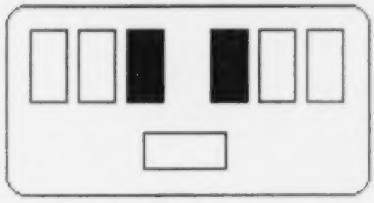
## Step #2

**f** = (go to 'file menu') "enter file command"



## Step #3

**c** = go to 'create file' "enter file to create"



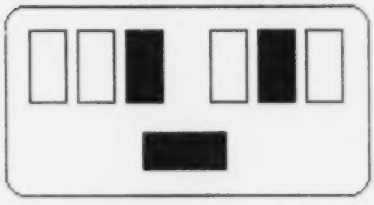
## Step #4

Enter the file name _____

**Note:** No punctuation, no cap. sign, no spaces, and no more than **8** characters. Grade 1 braille letters (no contracted braille). You can use Nemeth numbers but no number sign.

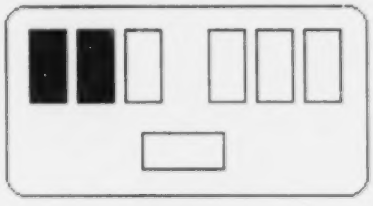
## Step #5

**e** chord = to go to next step "enter the file size"



## Step #6

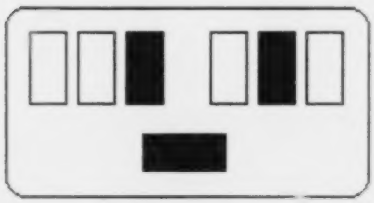
Enter nemeth number 2 (pages of memory space)



# Creating a file Continued

## Step #7

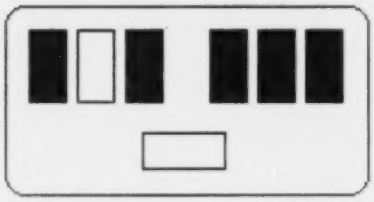
**e** chord = to go to next step "Use grade 2 translator"



## Step #8

Enter "y or n"

**y** = enter 'y' for a grade 2 braille user (contracted braille)



**yes**

## Step #9

The Braille 'n Speak will say: " _____ now open"
(your file name)

## Step #10

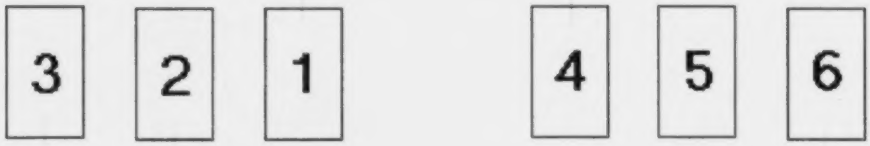
You are now in the file and ready to enter your text.

# Navigation Keyboard Wall Chart

Teacher quick reference sheets.

## Movement

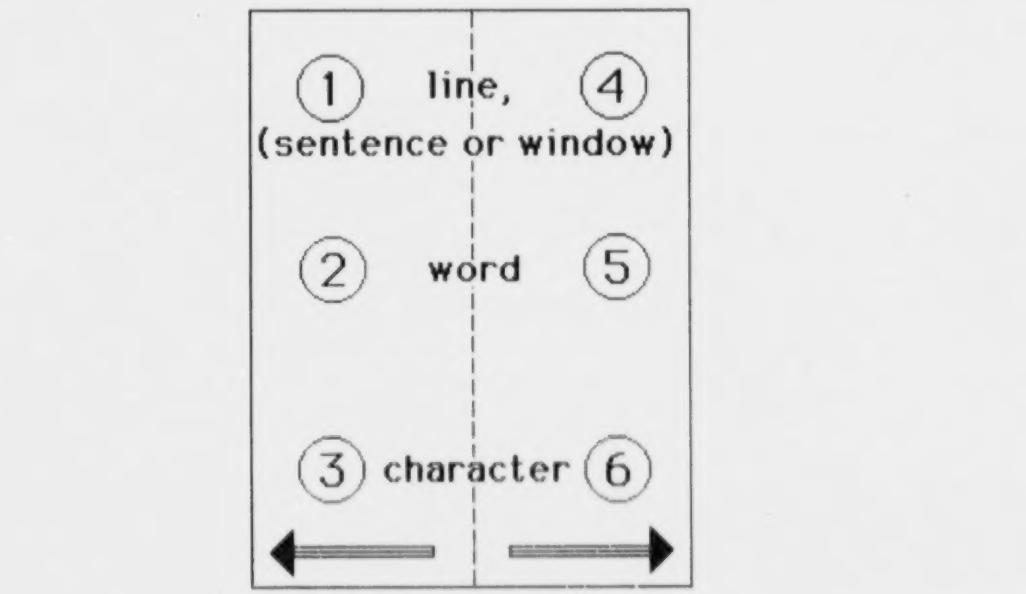
**line, (sentence or window)**




**word**

**character**

**Movement backwards** **Movement forwards**

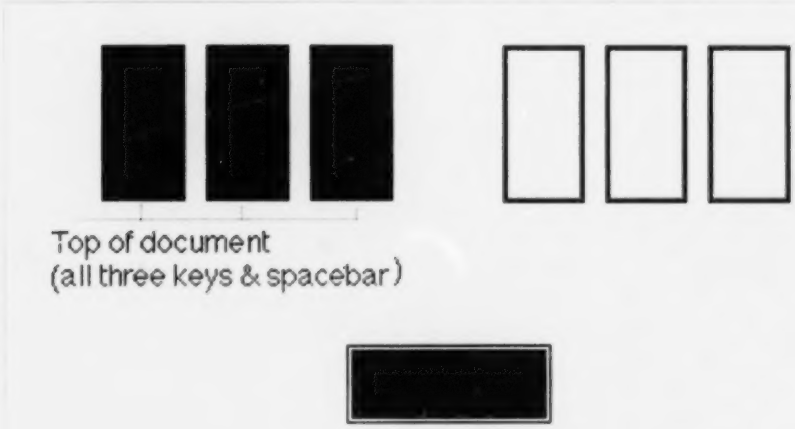


# Navigation Keyboard Wall Chart

## Top and End of File

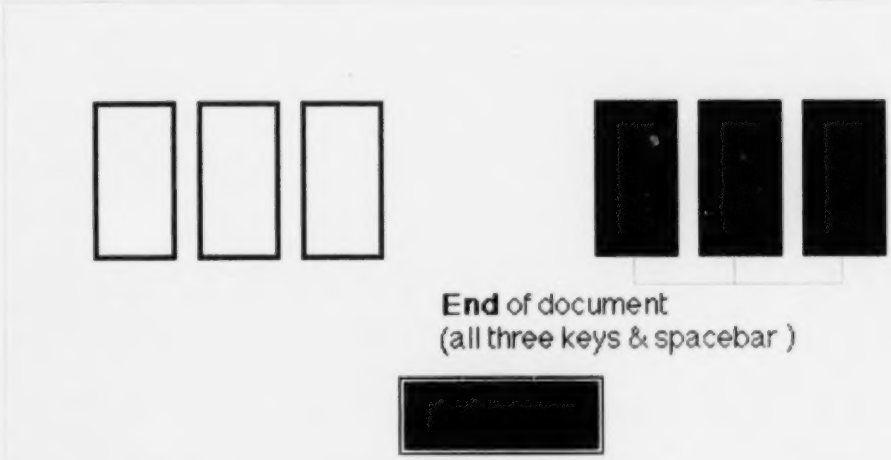
**Note**: These commands are all chorded.

## Top of file (Beginning of document)



Top of document
(all three keys & spacebar)

## End of file (End of document)

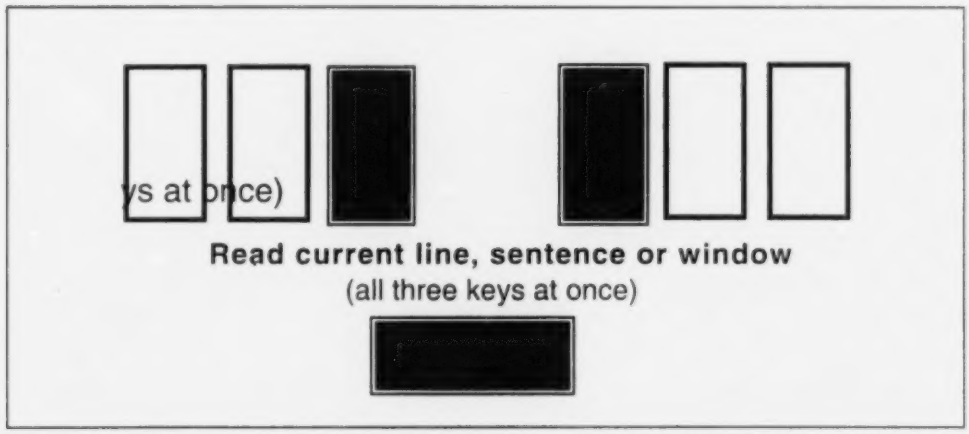


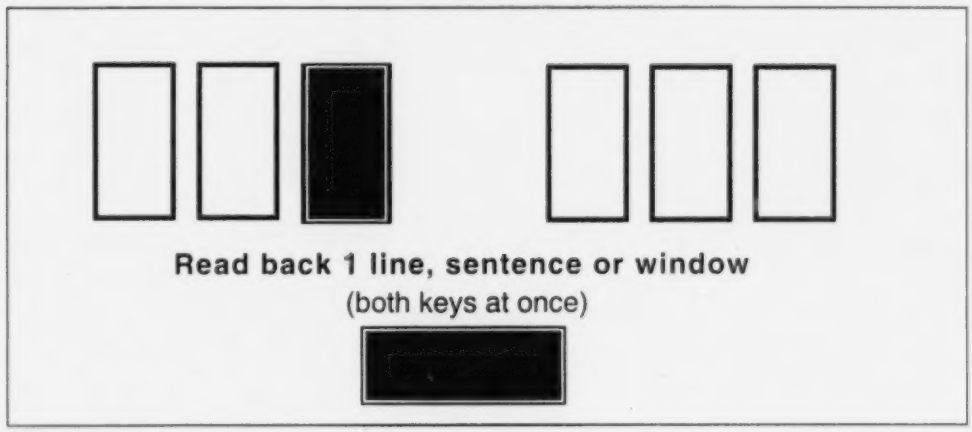
**End** of document
(all three keys & spacebar )

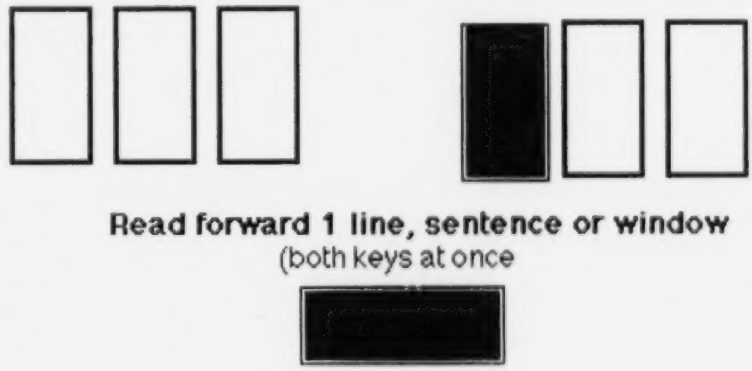
# Navigation Keyboard Wall Chart

Teacher quick reference sheets.

## Line, Sentence or Window



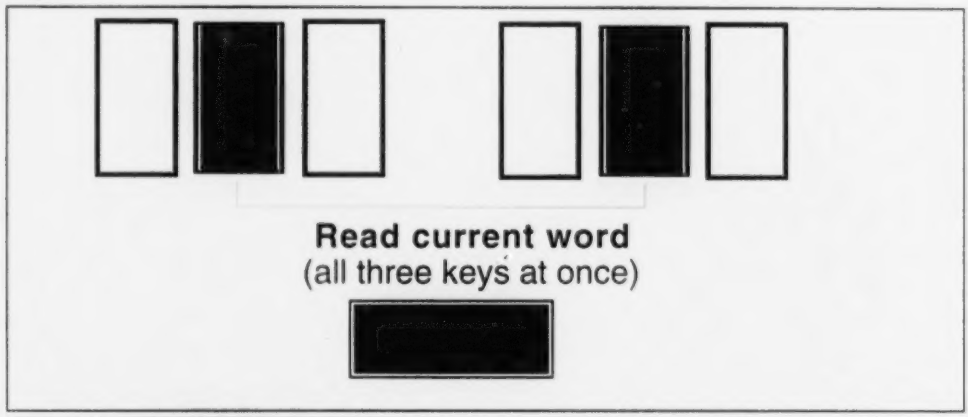



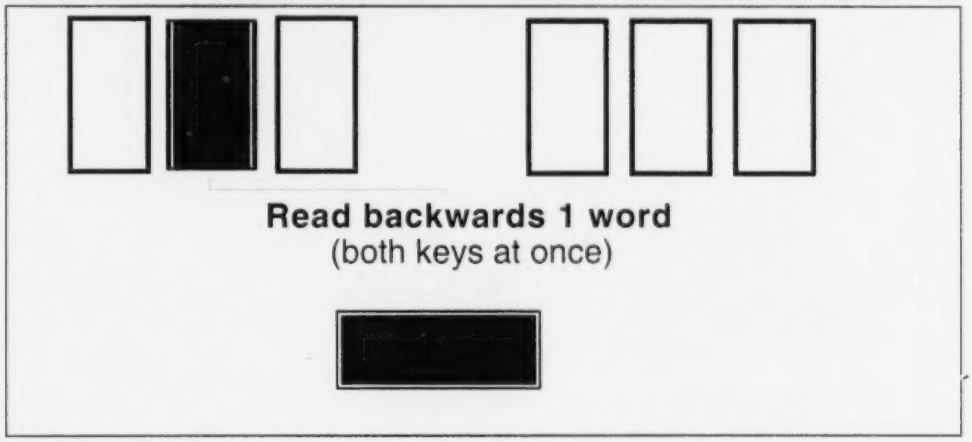
# Navigation Keyboard Wall Chart

Teacher quick reference sheets.

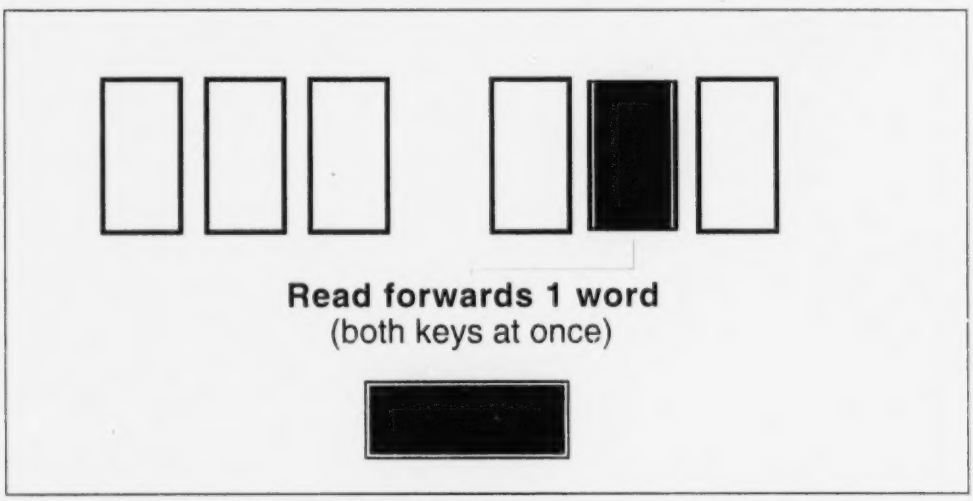
## Word



**Read current word**
(all three keys at once)



**Read backwards 1 word**
(both keys at once)

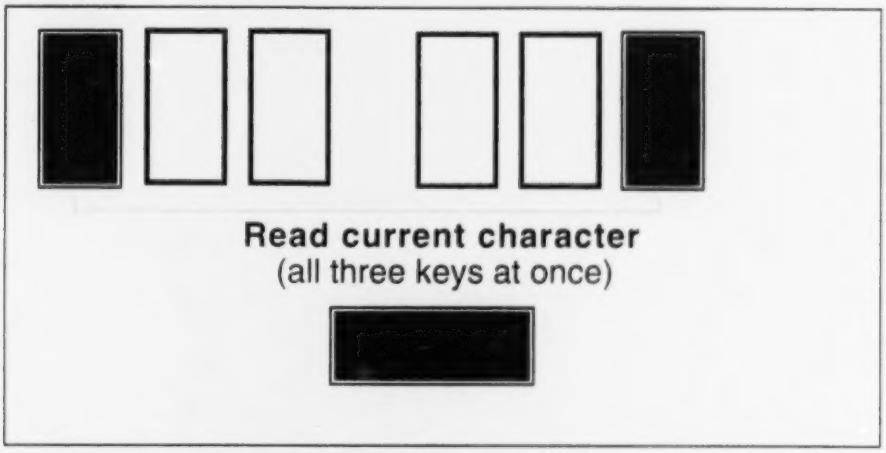


**Read forwards 1 word**
(both keys at once)

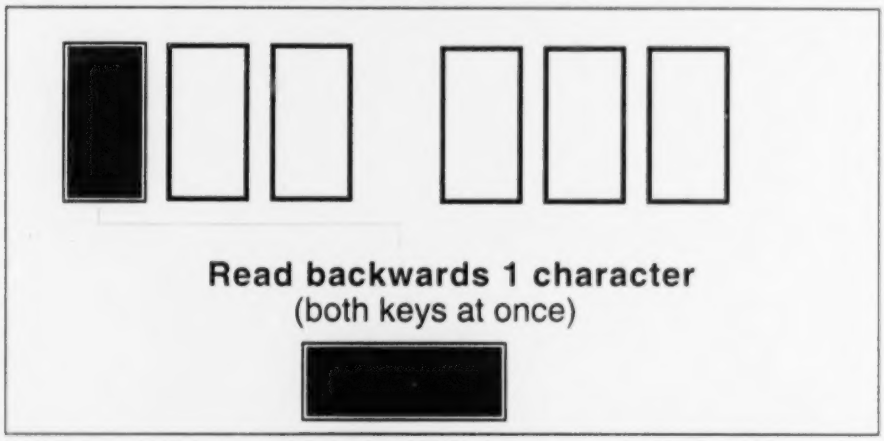
# Navigation Keyboard Wall Chart

Teacher quick reference sheets.

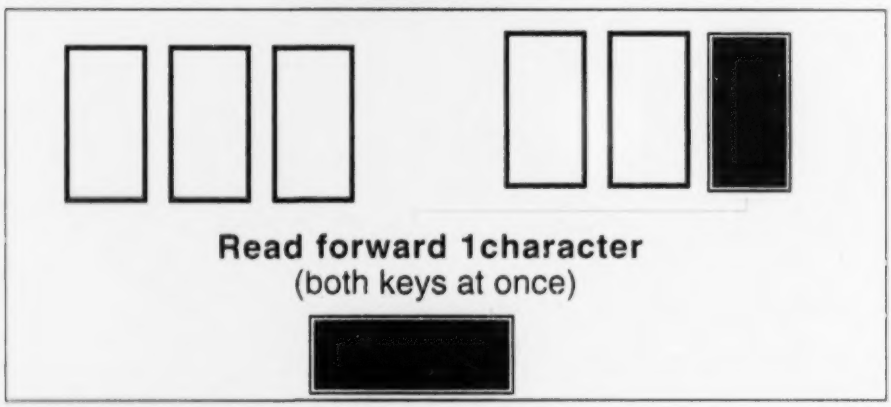
## Character



**Read current character**
(all three keys at once)



**Read backwards 1 character**
(both keys at once)

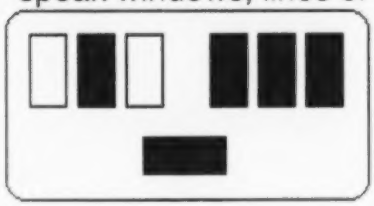


**Read forward 1character**
(both keys at once)

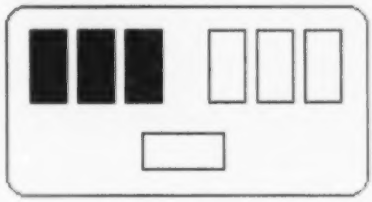
# Selecting a Reading Method

When you are in the file there are **three** reading modes.

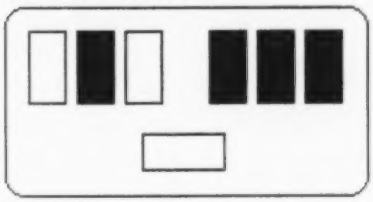
**w** chord =
"speak windows, lines or sentences"



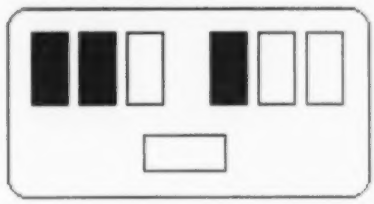
**L** = line



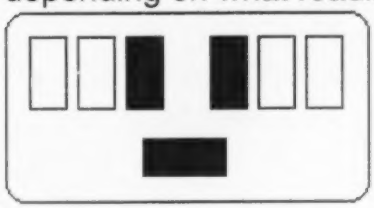
**w** = windows



**s** = sentences

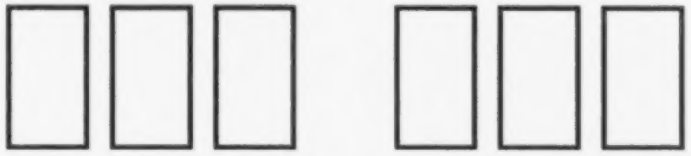


**Note:** The **c** chord will read the current line, sentence or window depending on what reading method has been selected.



# Movement Within a Document

**line, (sentence or window)**

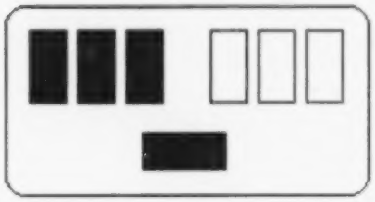


**word**

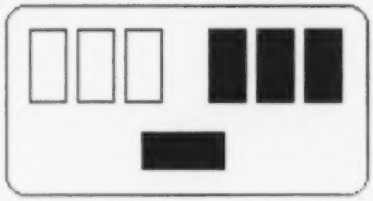
**character**

**Movement backwards** **Movement forwards**

**L** chord = "**top** of file"

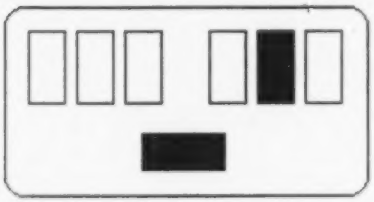


**dot 4, 5, 6** chord = "**end** of file"

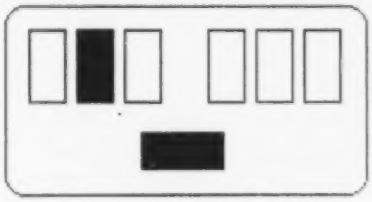


## Word

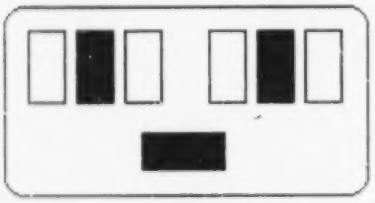
**dot 5** chord = **forward 1 word**



**dot 2** chord = **back 1 word**



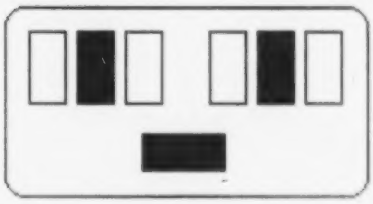
**dot 2, 5 = read current word**



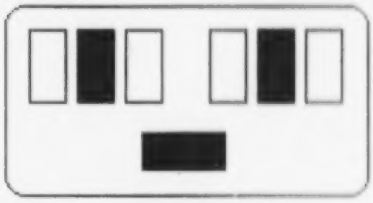
# Movement Within a Document Continued

## Word Continued

**Note:** If you repeat this chord it will spell the word letter by letter.
**dot 2,5** = spell current word

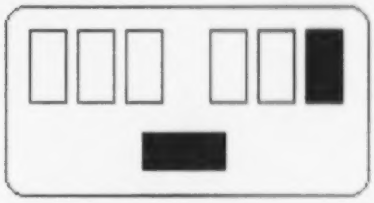


repeat **dot 2,5** = To turn off spell feature.

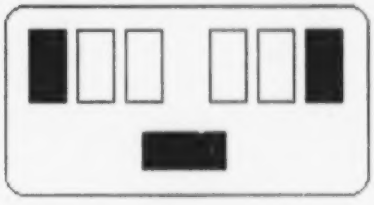


## Character

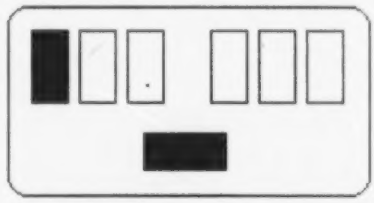
**dot 6** chord = **forward 1 character**



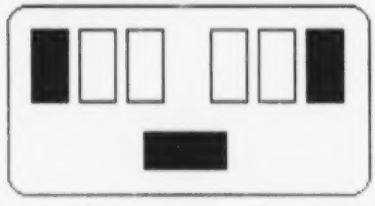
**dot 3,6** chord =
**read current character**



**dot 3** chord = **back 1 character**



repeat **dot 3,6** = spell character
See appendix **'International Phonetic Code'**

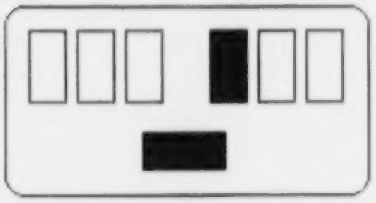


# Movement Within a Document Continued

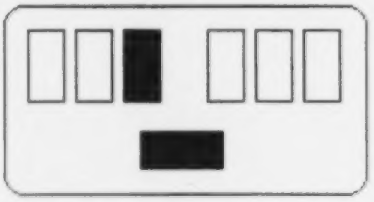
## Line, Sentence, Window

**Note:** The line keys can be programmed to read a line, sentence or a window. Please review the section **'Selecting a Reading Method'.**

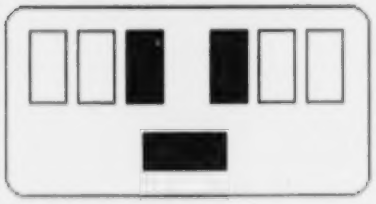
**dot 4** chord = **read forward 1line, sentence or window**



**a** chord = **read back 1line, sentence or window**



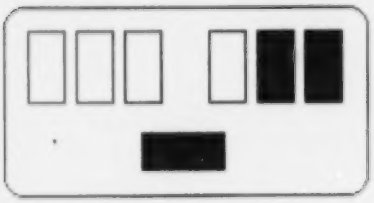
**c** chord = **read current line, sentence or window**



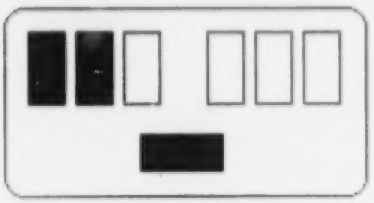
## Paragraph

**dot 5,6** chord = **read next paragraph**

**Note:** Braille 'n Speak makes a click sound when it moves between paragraphs.



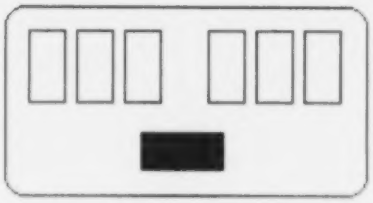
**dot 2,3** chord = **read previous paragraph**



## Movement Within a Document Continued

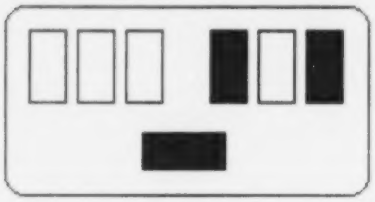
**er** chord = **read from cursor to end of file**

**space bar** = **stop reading**



## Creating New Lines

**dot 4, 6** chord = **"new line"** (This will start a new line in your document).

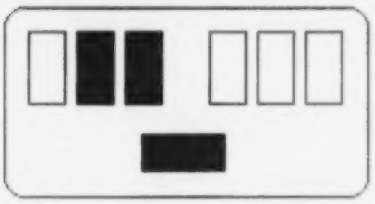


**Note:** If you want a blank line between your text press **dot 4,6** chord a second time.

## Simple Editing

## Deleting

**b chord** = back space delete

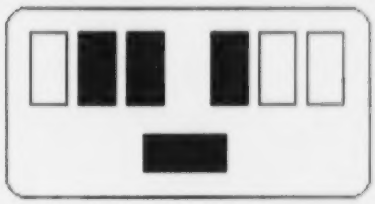


**Note: b** chord = back space delete (the character preceding will be deleted). This function is useful if you make an error while entering text and wish to correct it immediately (**b** chord will always delete the last character from the end of the document).

# How to Find Text Within the File

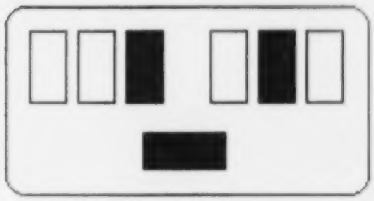
## Find Forwards (from cursor to end of file)

### Step #1
**f** chord = "enter text to find"



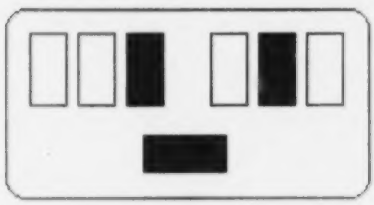
### Step #2
Enter the text you wish to find _____ .
e.g. to find 'cat' enter c a t
**Note:** Braille 'n Speak will also find words like catalog.

### Step #3
**e** chord = to find text

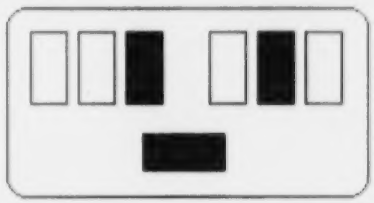


**Note:** To find a second occurrence of the same text:

**f** chord = "enter text to find"

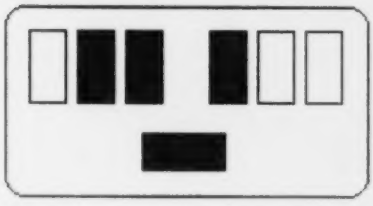


**e** chord = to find text



# Find Backwards

## Step #1
**f** chord = "enter text to find"

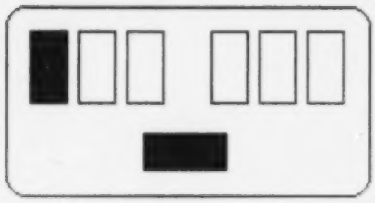


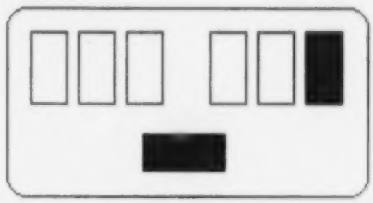
## Step #2
Enter the text you wish to find _____.

## Step #3
**th** chord = find text from cursor to top of file.

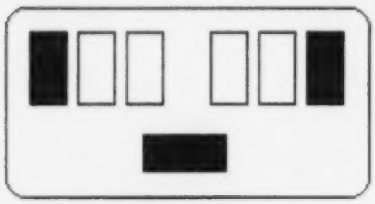
# Editing a Document

**Note:** The **dot 3** chord and **dot 6** chord are useful for navigating your way to the precise location within the document. This will move the cursor forwards or backwards one character.



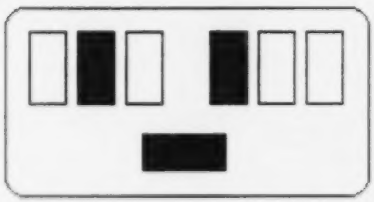


**Note:** Use the **dot 3, 6** chord (read current character) to ensure that you are exactly where you want to be.

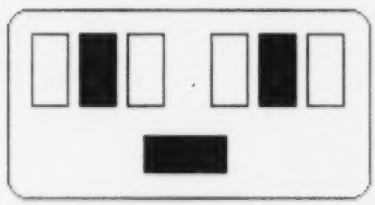


## Inserting

**i** chord = to **start** inserting (up to 255 characters) The Braille 'n Speak will say "insert mode active"

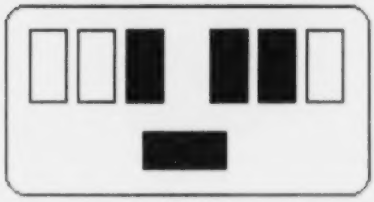


**e** chord = to **finish** inserting. The Braille 'n Speak will say "o.k."

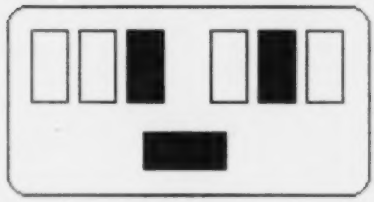


# Deleting

**d** chord = **start** deleting text
The Braille 'n Speak will say "enter delete parameter".



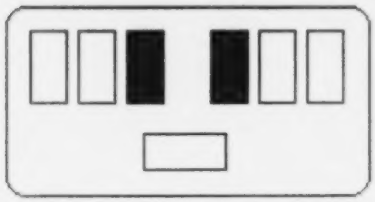
**e** chord = **finish** deleting text
The Braille 'n Speak will say "o.k."



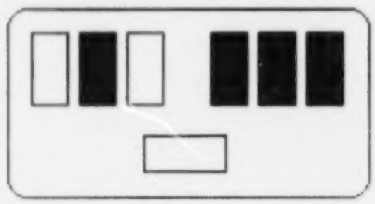
**Note:** There are 5 delete parameters to select. Use **e** chord to finish deleting.

## Delete Parameters

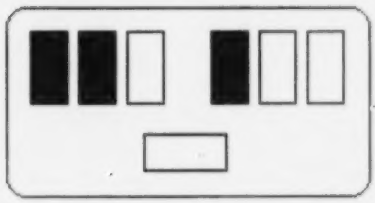
**c** = deletes current **character.**



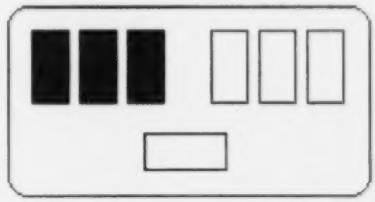
**w**= deletes current **word.**



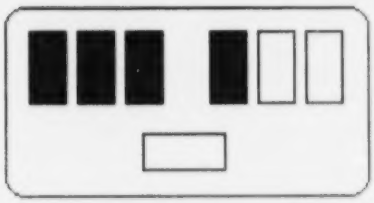
**s** = deletes current **sentence.**



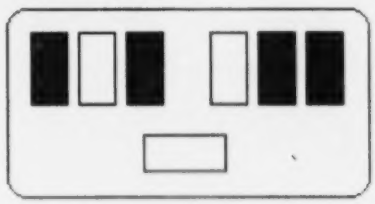
**L** = deletes current **line.**



**p** = deletes current **paragraph.**

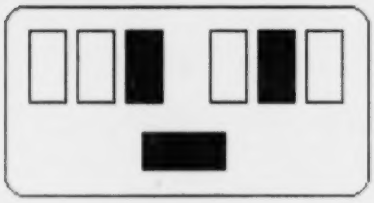


**z** = deletes from **cursor to end of document.**



# Deleting Continued

**e** chord = **finish** deleting text
The Braille 'n Speak will say
"o.k."



**Note:** You can enter a Nemeth number following a delete parameter (before pressing e chord) and it will increase the size of your delete; e.g. **w** = deletes current word followed by a **Nemeth 3** will delete current word and the next two words.

# Editing (examples)

**Note:** The editing examples provided require the knowledge of braille. You might wish to work in partnership with your student or client during this process.

## Inserting a Character

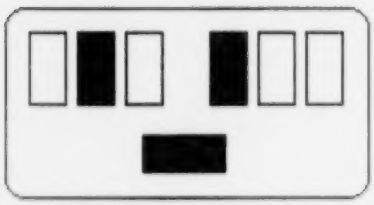
Braille the following sentence:
**"Braille will ever be the same."** (and a **dot 4,6** chord = new line)
You will be inserting the letter **'n'** missing from the word **'never'**.

## Step #1

Move your cursor to the dot 5 of the word 'ever'.

## Step #2

**i** chord = "insert mode active"

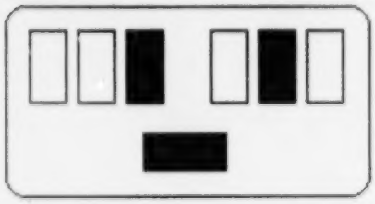


## Step #3

Braille the missing letter **'n'**

## Step #4

**e** chord = to **finish** inserting.



Check your work with 'read current' line.

**Note:** When inserting a word place the cursor in the space separating the twowords between which you are inserting.

**e.g.** If you have the following sentence "Fred the cat is fat" and wish to change this to "Fred the **big** cat is fat" you would first go to the space between 'the' and 'cat' and then activate the insert mode. Be sure to press the spacebar before brailling the word 'big'.

# Editing (examples) Continued

## Deleting a Character

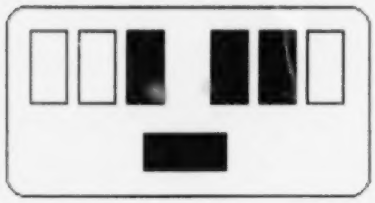
Braille the following sentence:
**"Your milk iss on the table"** (and a **dot 4,6** chord = new line)
You need to delete an **'s'** from the word 'iss'.

### Step #1

Move your cursor to the first character you want to delete (the letter **'s'**).

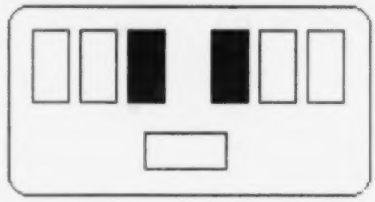
### Step #2

**d** chord = "enter delete parameter"



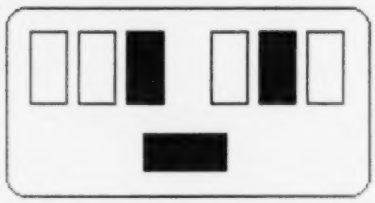
### Step #3

**c** = deletes current **character.**



### Step #4

**e** chord = **finish** deleting text



## Deleting a Word (example)

Braille the following sentence:
**"The Spring bulbs are very beautiful"** (and a **dot 4,6** chord = new line)
You will be deleting the word **'Spring'** from the sentence.

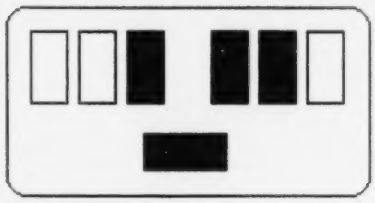
### Step #1

Move your cursor to the **'dot 6'** of the word **'Spring'**.

# Editing (examples) Continued

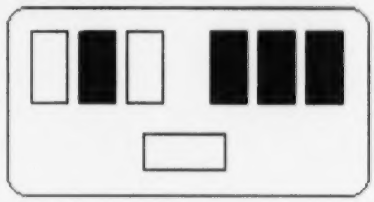
## Step #2

**d** chord = "enter delete parameter"



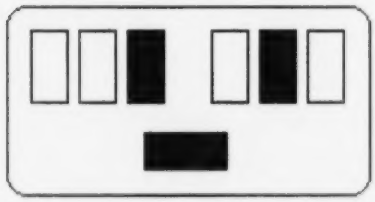
## Step #3

**w** = deletes '**Spring**' from the sentence.



## Step #4

**e** chord = **finish** deleting "ok"



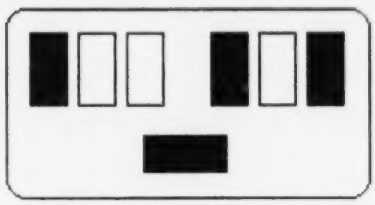
## Undoing a Delete 'Whoops!'

Deletes are held in the clipboard. You can use the paste command to undo a delete.

## Paste Command

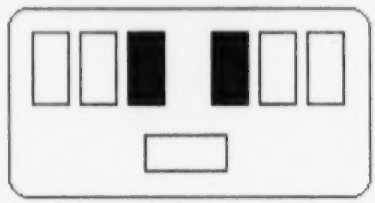
### Step #1

**ing** chord = "paste what?"



### Step #2

**c** = from the clipboard "clipboard o.k."



**Note:** If you have not moved after the delete it will go back where it came from. Otherwise it will be pasted to wherever the cursor is, therefore if you wish to undo a deletion do it straight away. **Any other use of the clipboard (delete, copy, calculator) will erase your last deletion.**

## Inserting a Word (example)

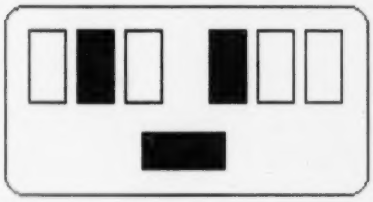
You should now have the following sentence:
**"The Spring bulbs are very beautiful"**
Insert the word **'tulip'** before the word bulbs.

### Step #1

Move your cursor to the first **'b'** in the word **'bulbs'**

### Step #2

**i** chord = "insert mode active"

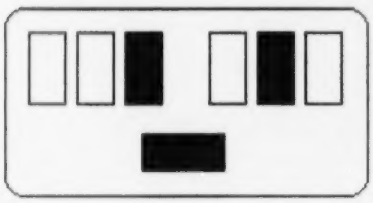


### Step #3

Braille the word '**tulip**' followed by a space.

### Step #4

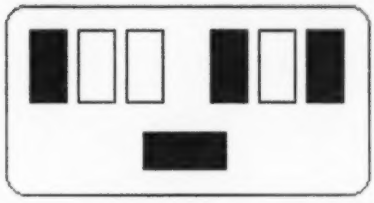
**e** chord = to **finish** inserting.



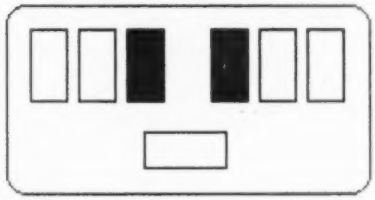
# Paste from Clipboard

The **clipboard** is like a 'holding pen' of information. Chunks of text can be cut or copied and moved to other areas of a document.

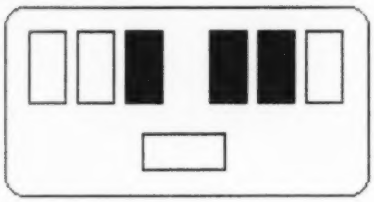
**3,4,6** chord = "paste what?"



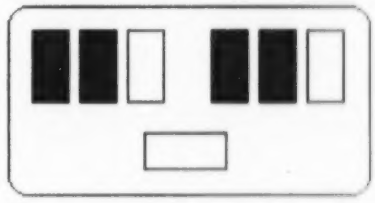
**c** = paste contents of clipboard at cursor position



**d** = the **date** will be pasted



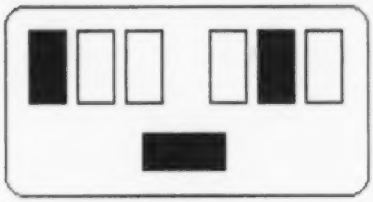
**t** = current **time** will be pasted



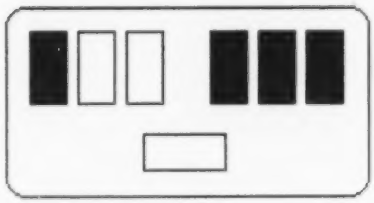
# Automatic Page Numbering

To set 'Automatic Page Numbering' you have to open the 'Status Menu'.

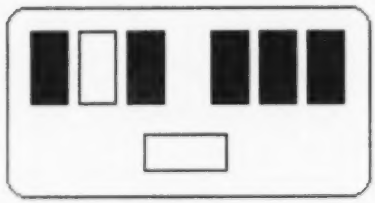
**st** chord = open 'Status Menu'



**dot 3,4,5,6** (braille # sign) = page numbering

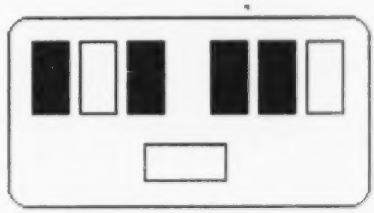


enter **y**



yes

or **n**



no

# Printing Your Text

The Braille 'n Speak can print to a braille or ink printer.
Braille 'n Speak is a serial device.

If you are using a parallel braille or print printer there are special cables available that convert from parallel to serial (about $175 Can.).

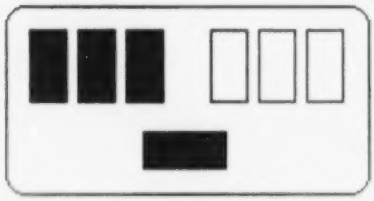
**Note:** For more information please check the section on '**Page Format Parameters**'. The page format parameters for braille and print may need to be customized.

## Step #1

Hook your Braille 'n Speak to your printer. Make sure that it is turned on, paper is loaded and that the printer is 'on line' or selected.

## Step #2

**L** chord = move to top of file

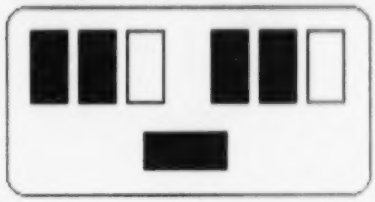


**Note:** It is a useful idea to place a 'new line' 4,6 chord at the beginning and end of your document. This will minimize possible printing problems.

## Step #3

t chord = "Enter transmit parameter"

Braille 'n Speak wants to know how you want the file printed.

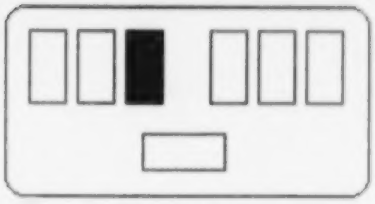


# Printing Your Text Continued

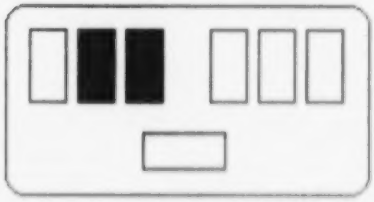
## Step #4

Make a choice between the following:

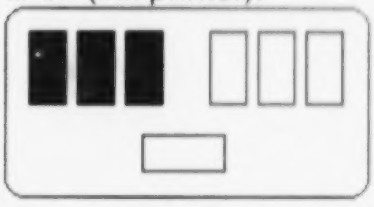
**a =(for regular print printer)** prints all text in file.



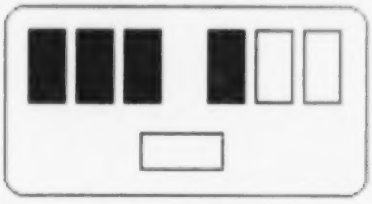
**b =(for braille printer)** prints the file entered into the Braille 'n Speak (If it was typed in contracted Braille, then that is how it will be sent to the printer).



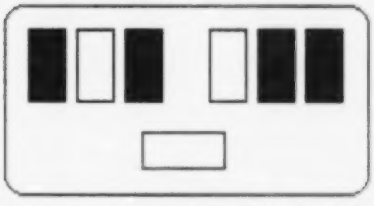
**L** = prints the line that the cursor is on (ink printer).



**p** = prints a paragraph (ink printer).



**z** = prints from cursor to end of paragraph (ink printer).



Wait until the Braille 'n Speak says "waiting on serial device" then:

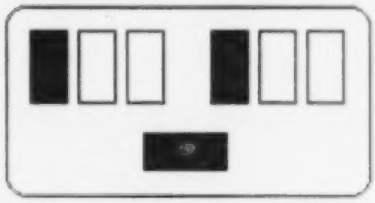
1. Check that your printer is 'on line' or 'selected'. **or**

2. Check the 'serial communication settings' of the Braille 'n Speak in the Status Menu (see Status Menu section) and refer to the printer manual for appropriate settings.

# Setting Page Format Parameters

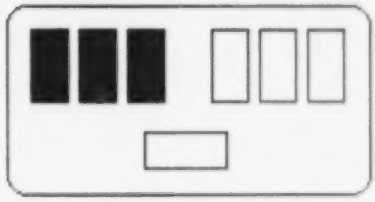
## Step #1

**st** chord = "Status Menu"



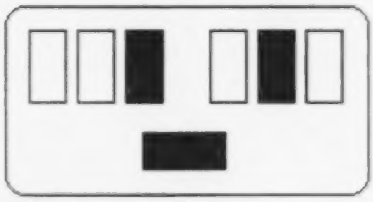
## Step #2

**L** = "Line length" (followed by the number of the current setting)
Enter the number of characters per line (**40** is standard for 11" wide braille paper, **34** is standard for 8 1/2" wide braille paper and **72** is the standard for print). Enter all numbers in the Nemeth format - see 'Nemeth Code Numbers' - do not use the number sign.



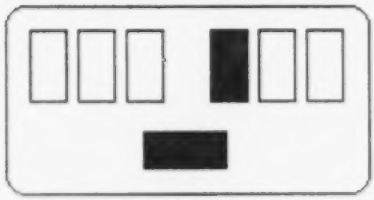
## Step #3

**e** chord = "line length" (followed by the number that you have just entered)



## Step #4

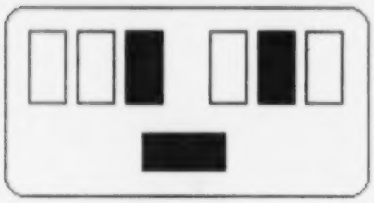
**dot 4** chord = "left margin" (followed by the number of the current setting)
Enter the number of spaces from the left margin (enter Nemeth **1** for braille) or (enter Nemeth **8** for print). This will vary depending on your printer.



# Setting Page Format Parameters

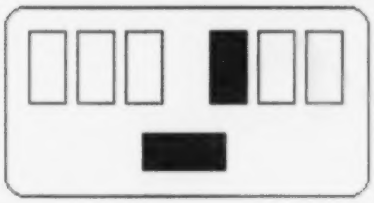
## Step #5

**e** chord = "left margin" (followed by the number which you have set)



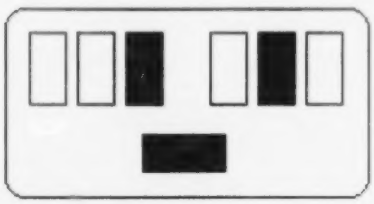
## Step #6

**dot 4** chord = "page length" (followed by the number of the current setting)
(Enter in Nemeth numbers **25** for braille or **56** for print).



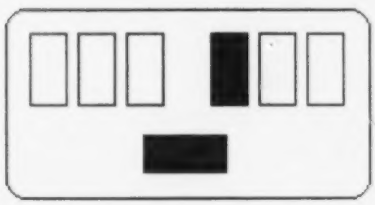
## Step #7

**e** chord = "page length" (followed by the number that you have set)



## Step #8

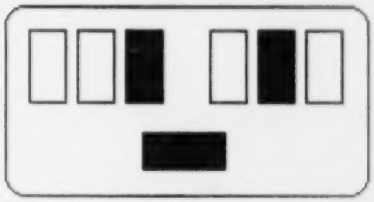
**dot 4** chord = "top margin" (followed by the number of current setting)
(Enter in Nemeth numbers **1** for braille and **3** for print).



# Setting Page Format Parameters

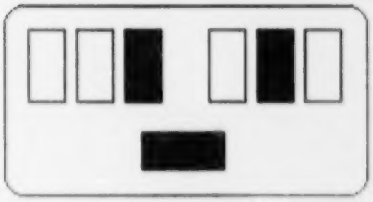
## Step #9

**e** chord = "top margin" (followed by the number you have set)



## Step #10

Enter **e** chord to exit the Status Menu.
There are additional 'Satus Menu' settings available, please consult your 'Quick Reference Guide' or 'User Guide'.



# Renaming the Open File

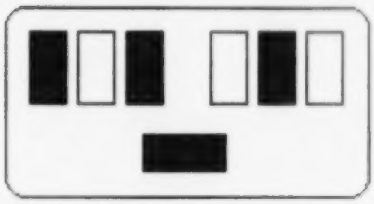
**Note:** This is the safest way to rename a file.

## Step #1

Open the file that you wish to rename.

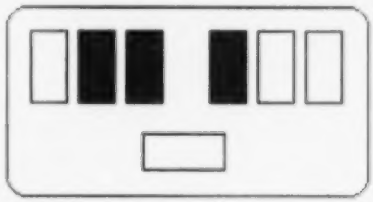
## Step #2

**o** chord = "option"



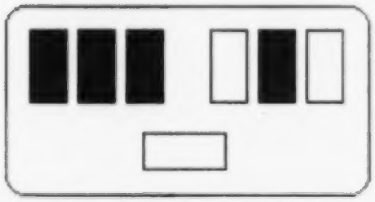
## Step #3

**f** = "enter file command"



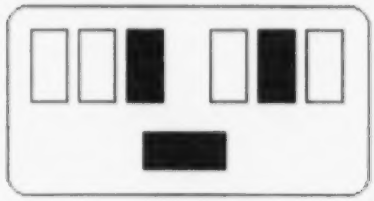
## Step #4

**r** = "enter file name"
Enter new file name _____ .



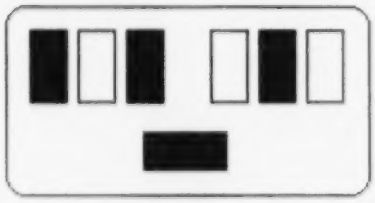
## Step #5

**e** chord = "okay, enter file command"



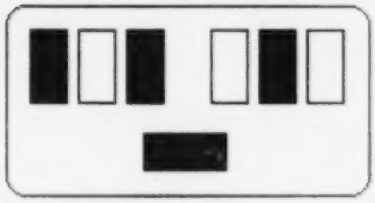
## Step #6

**o** chord = to open newly named file.

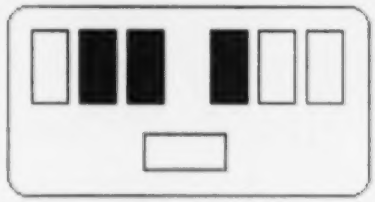


# Renaming Another File

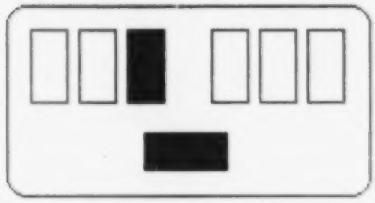
## Step #1
**o** chord = "option"



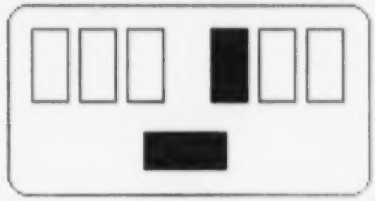
## Step #2
**f** = "enter file command"



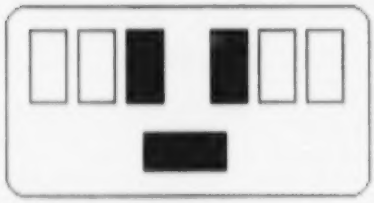
## Step #3
**dot 1** chord = move up file list



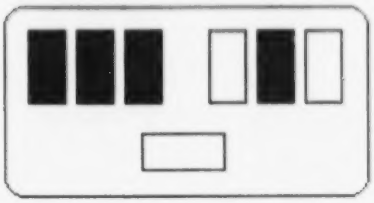
## Step #4
**dot 4** chord = move down file list



## Step #5
**dot 1, 4** chord = read current file name.

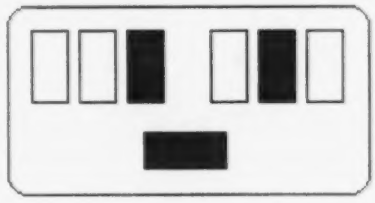


## Step #6
**r** chord = "enter file name"



## Step #7
Enter new file name _____

## Step #8
**e** chord = "okay, enter file command"

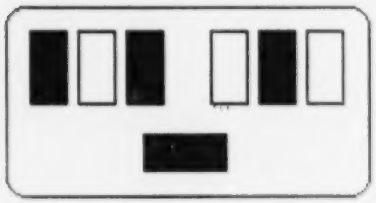


# Deleting the Open File

**Note:** This is the safest way to delete a file.

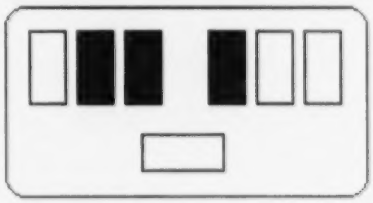
## Step #1

**o** chord = "option"



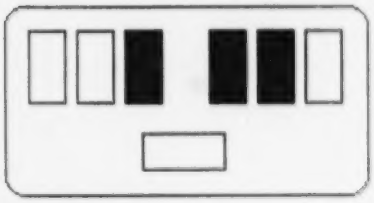
## Step #2

**f** = "enter file command"



## Step #3

**d** = "enter file name to delete"

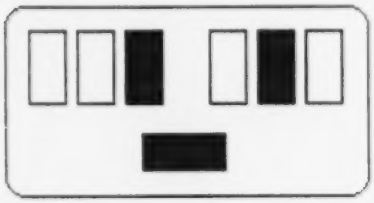


## Step #4

Type name of file you wish to delete.

## Step #5

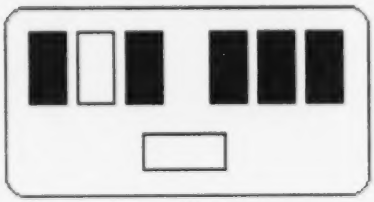
**e** chord = "delete file _____ are you sure?"
(file name)



## Step #6

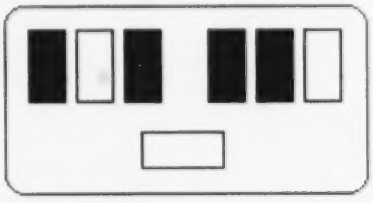
enter **y** or **n** (**y** to delete a file)

**yes**



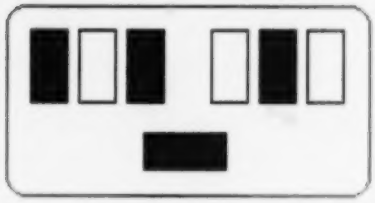
**or**

**no**

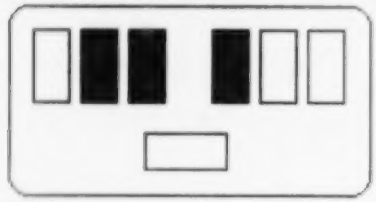


# Deleting Another File

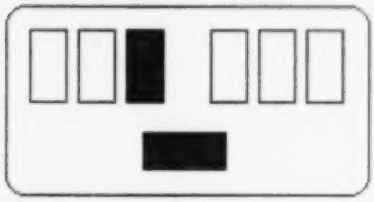
## Step #1
**o** chord = "option"



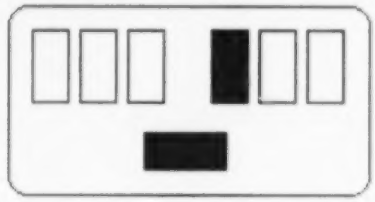
## Step #2
**f** = "enter file command"



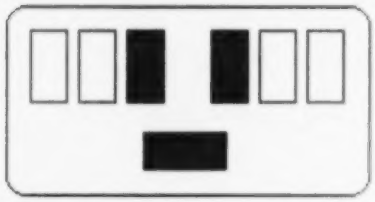
## Step #3
**dot 1** chord = move up file list



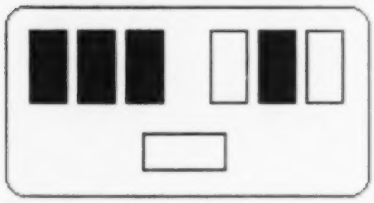
## Step #4
**dot 4** chord = move down file list



## Step #5
**dot 1, 4** chord = read current file name.

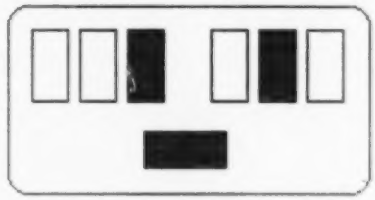


## Step #6
**r** chord = "enter file name"



## Step #7
Enter new file name _____

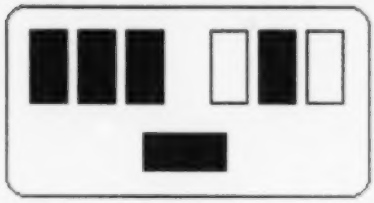
## Step #8
**e** chord = "okay, enter file command"



# Expanding a File

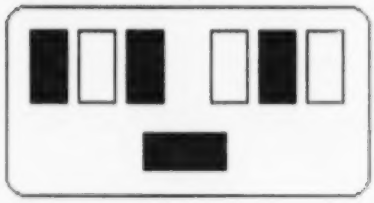
**Note:** Open the file that you wish to expand before going through the following steps.

**r** chord = speaks room left in file.



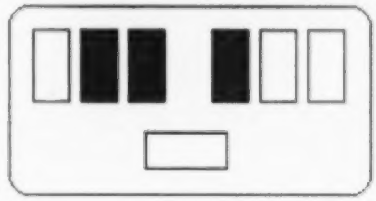
## Step #1

**o** chord = "option"



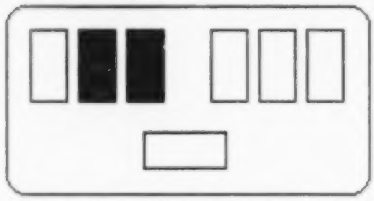
## Step #2

**f** = "enter file command"



## Step #3

**b** (for bigger) = "Enter the number of pages to expand".

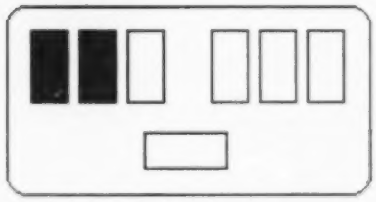


If you have not expanded the file before it will be set at 2 pages. To increase the size of your file enter the **Nemeth number 2** (see Nemeth number sheet if you require assistance).

**Note:** This refers to memory space and not to pages of text.

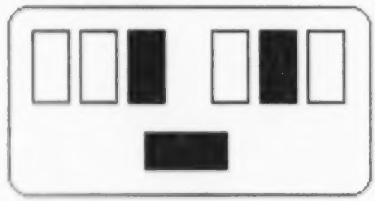
## Step #4

**2 pages**



## Step #5

**e** chord = to exit



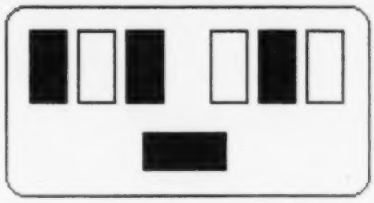
**Note:** Don't make files too large.

# Expanding a File Continued

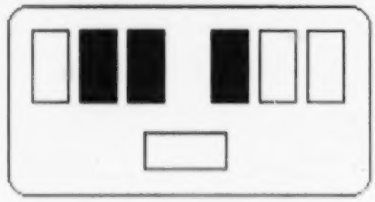
## Shortcut Method

To make the following changes you must be on that particular file in the **'File Menu'.**

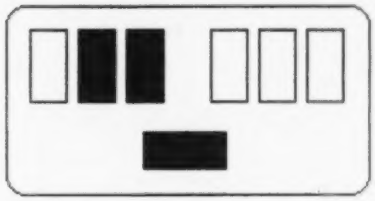
**o** chord = "option"



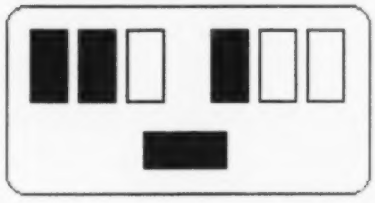
**f** = "enter file command"



**b** chord = makes pointed to file bigger.



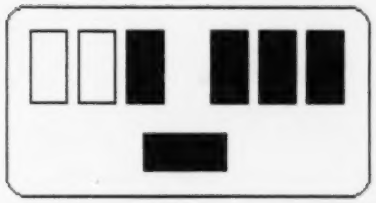
**s** chord = makes pointed to file smaller.



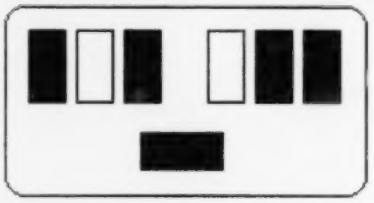
# Help File

**Note:** Most students find the 'help file' difficult to understand. It verbally lists all the Braille 'n Speak commands one by one (about 64). However they can be useful if they are printed and used as a reference for commands that are not used frequently.

**th** chord = go to the 'help file'



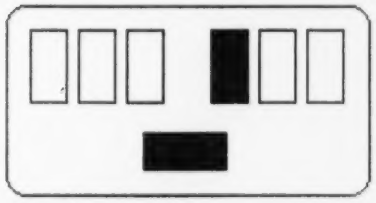
**z** chord = abort 'help file' (back to the file you were in before going to 'help file')



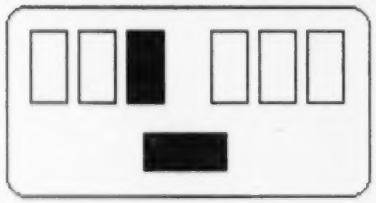
Use the Braille 'n Speak navigation commands to review the help file.

## Movement Within the 'Help File'

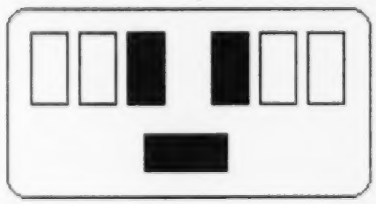
**Forwards**
**dot 4** chord = reads next item in the list.



**Backwards**
**a** chord = reads previous item in the list.



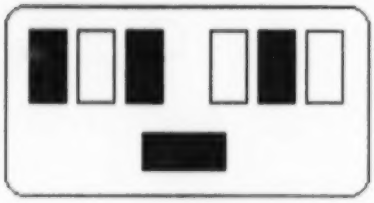
**Repeat**
**c** chord = repeats same line in list.



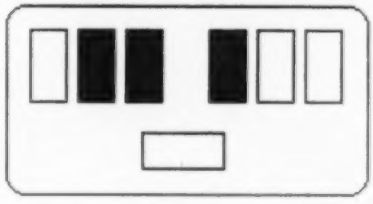
# Protecting and Unprotecting Files

**Note:** To make the following changes you must be on that particular file in the **'File Menu'**.

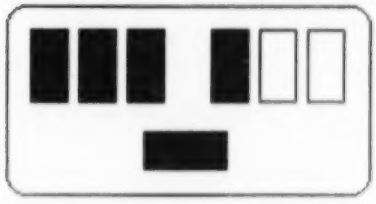
**o** chord = "option"



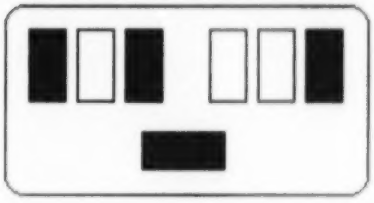
**f** = "enter file command"



**p** chord = protects pointed to file.



**u** chord = unprotects pointed to file.



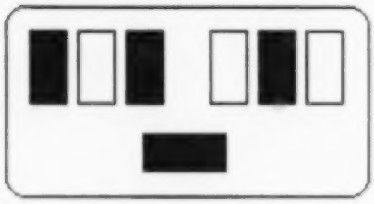
# Calculator

**Note:** Operators available are addition, subtraction, multiplication, division, percentage and square root.

**How to open Braille 'n Speak calculator functions.**

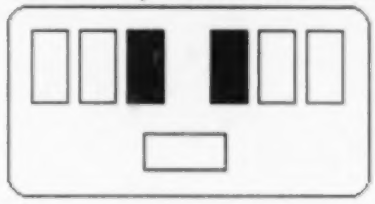
## Step #1

**o** chord = "option"



## Step #2

**c** = calculator (you are now in the calculator) "calculator ready"

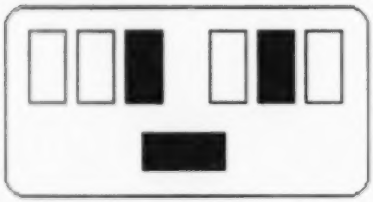


**How to close calculator functions.**

**z** chord = exit

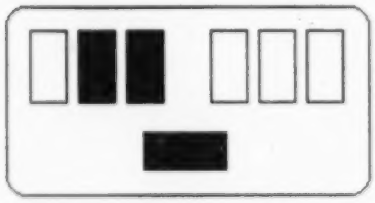
## Calculator Functions

**e** chord = enter key (after brailling all elements without space, **e** chord gives results)

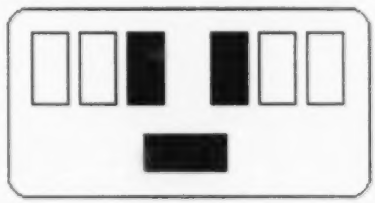


**Note:** Leave no spaces - like Nemeth sums.
(see sample on page 14 **'A Teacher's Guide to Braille 'n Speak'**)

**b** chord = back space

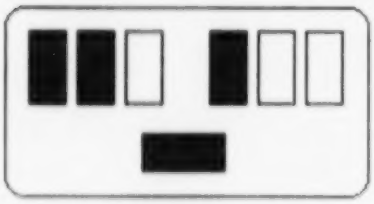


**c** chord = speak display

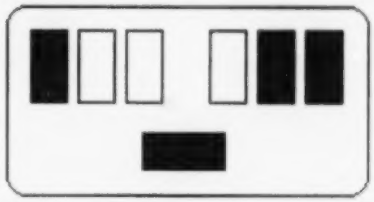


# Calculator Functions Continued

**s** chord = 6 memory spots (a-f)

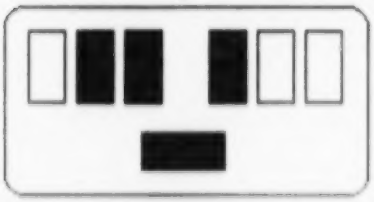


**(zero)** chord = clears results
Clear before starting a new calculation.



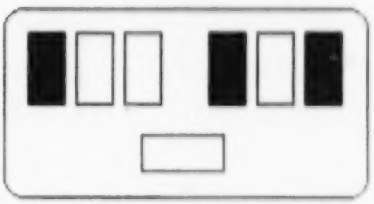
**Note:** To save a number (quantity) select letters **'a'** through **'f'** to store and key that letter again when you wish for that number to reappear. You can store up to 6 items at a time.

**f** chord = digits / numbers

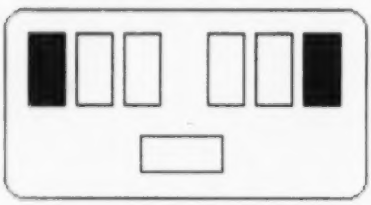


## Operators

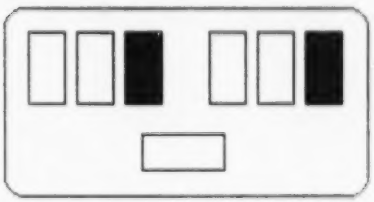
**dot 3,4,6** = +
[the 'ing' sign] (addition)



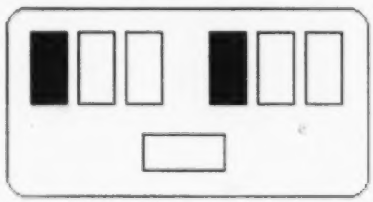
**dot 3, 6** = -
[hyphen] (subtraction)



**dot 1, 6** = x
[ch sign] (multiplication)

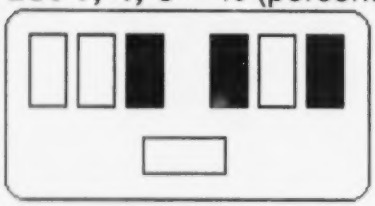


**dot 3, 4** = ÷
[st sign] (division)

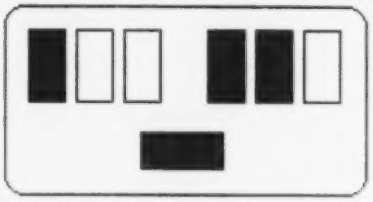


# Calculator Continued

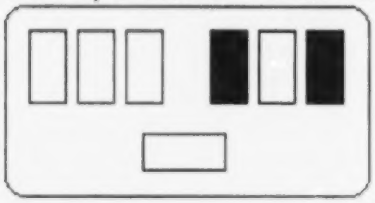
**dot 1, 4, 5** = % (percentage)



**dot 3, 4, 5** chord = √ (square root)



**dot 4, 6** chord = decimal point

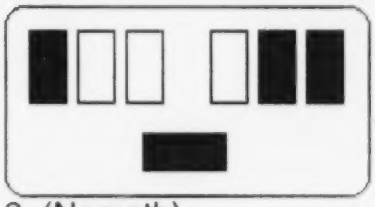


**Example**

If you want the sum 2+2 you would enter the following. Use all Nemeth numbers - see Nemeth number sheet if you require assistance.

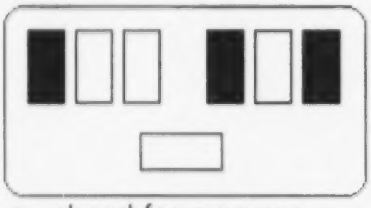
**(zero)** chord = clears results

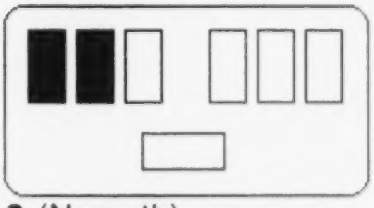
Clear before starting a new calculation.



2 (Nemeth)

**plus** [the 'ing' sign]

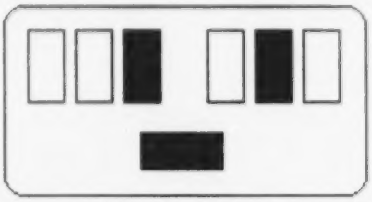


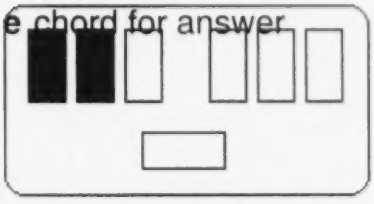


**2** (Nemeth)

**e** chord for answer

**e** chord for answer





Your answer will be "4" or "4 period" depending on what speech mode you have selected.

# Calculator Continued

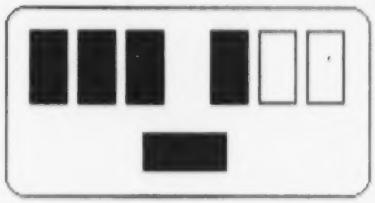
## Setting the precision of calculation

**Note:** If you ask the Braille 'n Speak to perform impossible calculations it will say "error".

If you are completing a calculation that requires an answer to more decimal places follow the next 3 steps.

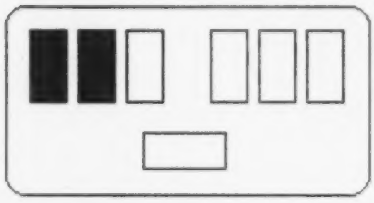
### Step #1

**p** chord = "enter precision"



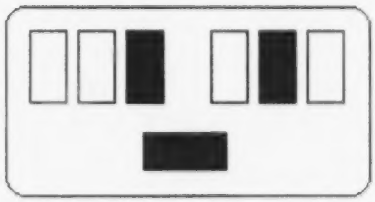
### Step #2

Enter the Nemeth number 2 (or the number of decimal places required).



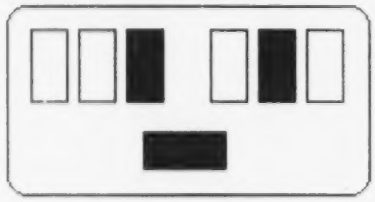
### Step #3

**e** chord = exit



### Step #4

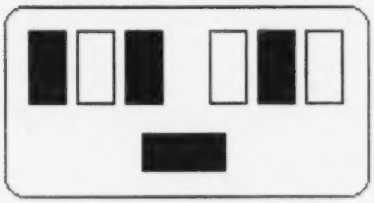
**e** chord = will repeat the result of your previous calculation to the new number of decimal places.



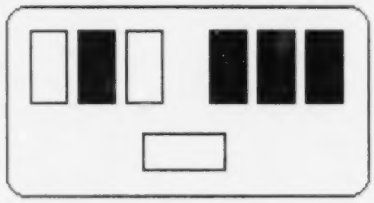
**Note:** Your calculator is now correct to two decimal places or the number of decimal places selected in 'step #2'.

# The Stopwatch Function

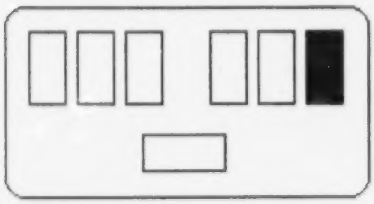
**o** chord = "option"



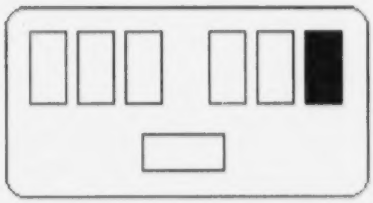
**w** = "stopwatch ready"



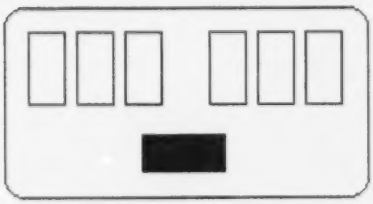
**dot 6** = "running"



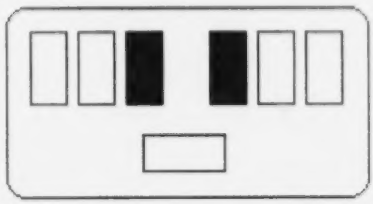
**dot 6** = "stopped"



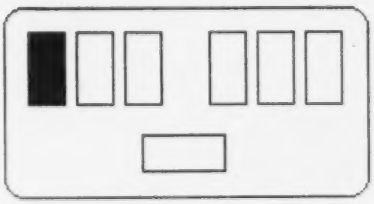
**space bar** = time elapsed (spoken)



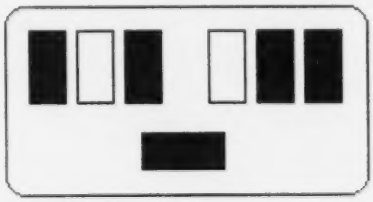
**c** = review last time announced



**dot 3** = set to zero ("stopped ..... reset.")



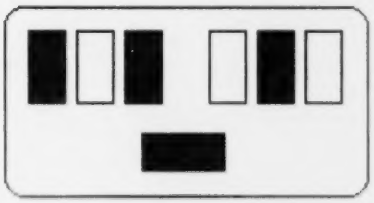
**z** chord = exit stop watch



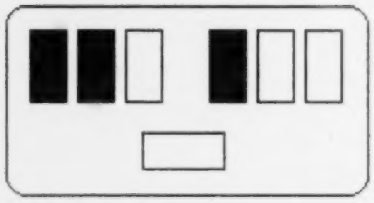
# Time Function

## Setting the Time

### Step #1
**o** chord = "option"



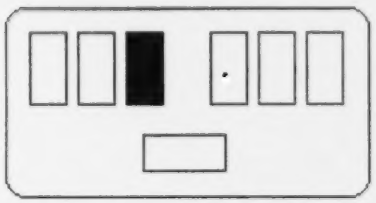
### Step #2
**s** = "set"



### Step #3
**t** = "enter time HH MM"

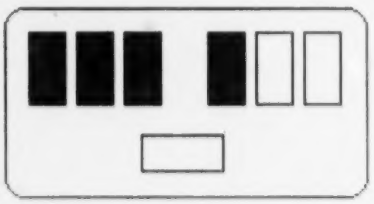
**Note:** If you are entering **08:56** you would enter **0, 8, 5, 6** (using Nemeth numbers). Do not leave any spaces between the numbers. Please refer to the Nemeth numbers page in this guide.

### Step #4
**a** = a.m.



**or**

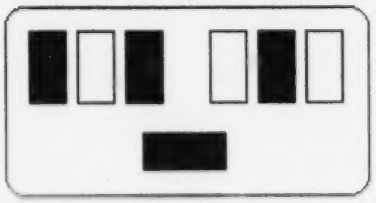
**p** = p.m.



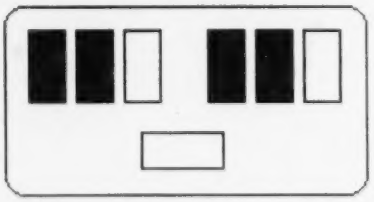
Braille 'n Speak will now say the correct time.

## Speaking the Time

### Step #1
**o** chord = "option"



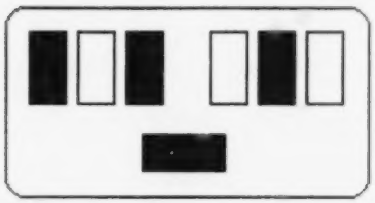
### Step #2
**t** = "The time is ....."



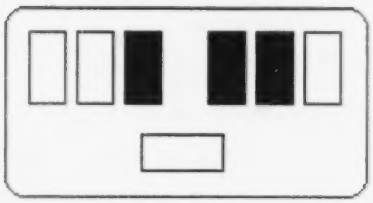
# Date Function

## Setting the Date

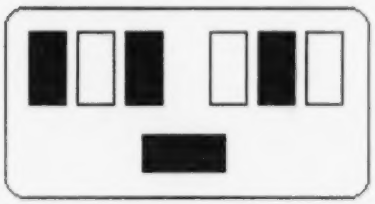
### Step #1
**o** chord = "option"



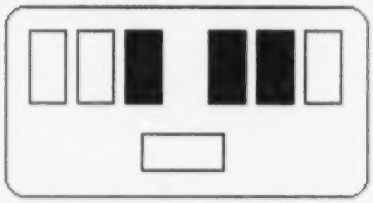
### Step #2
**d** = "today is ....."



### Step #3
**s** = "set"



### Step #4
d = "enter date MMDDYY"

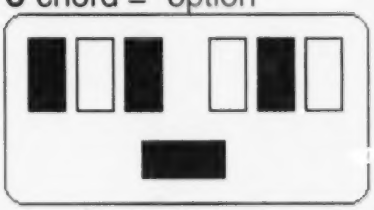


**Note:** You must enter two digits for the month, day and year (using Nemeth numbers). Do not leave any spaces between the numbers. Please refer to the Nemeth numbers page in this guide.
For example if the date is **March 22nd 1994** you would enter the following numbers: **032294**

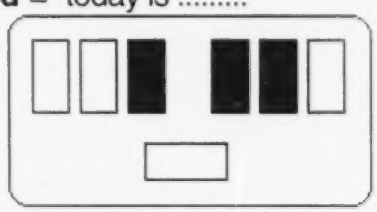
**Note:** Please see your manual if you require additional calendar features.

## Speaking the Date

### Step #1
**o** chord = "option"



### Step #2
**d** = "today is ....."



# Use of Disk Drive

## The disk drive has the following uses:

1. Data storage backup.
2. Increased storage.
3. Operate the spell checker.
4. To transfer data quickly between computers without using cable attachments (Braille 'n Speak and Macintosh or vice versa).

The disk drive is attached directly to the Braille 'n Speak using the provided cables.

**Caution:**
The disk drive is very sensitive to dropping, bumping and cool weather etc. It is important that special care is exercised.

**Diskdrive Battery Low:** A 'beep, beep, beep' sound will let you know when it needs charging; **only** recharge when battery is low.

**Charging:**
The charging time is **8 hours**. The adaptor cord plugs into the back of the diskdrive. Be careful not to overcharge the diskdrive. Only use the Braille 'n Speak A.C. adaptor for charging - if you lose your adaptor be sure that it is replaced.

**On/Off:**
When the diskdrive is turned on (use the rocker switch at the rear of the unit to turn it on/off) it makes a 'bing bong bing' sound . If this sound does not occur check cables or recharge the diskdrive.

**Power Reminder:**
To let you know that the diskdrive is on it will make a beeping sound every 5-10 minutes.

**Loading to the Braille 'n Speak:**
Use the directory command to find the file that you wish to transfer. Make sure that you have enough room in your Braille 'n Speak before transferring files from the diskdrive. When you enter the **S** chord the Braille 'n Speak will say "Storage". When this is followed by the letter 'L' the Braille 'n Speak will say "Enter file name". Enter the name and press **e** chord. You should now hear the diskdrive transferring the information to the Braille 'n Speak.

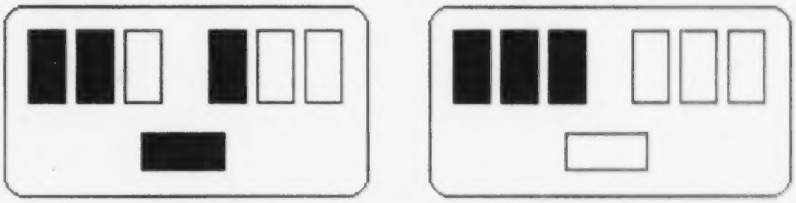
# Disk Drive Commands

All disk commands begin with **s chord**.

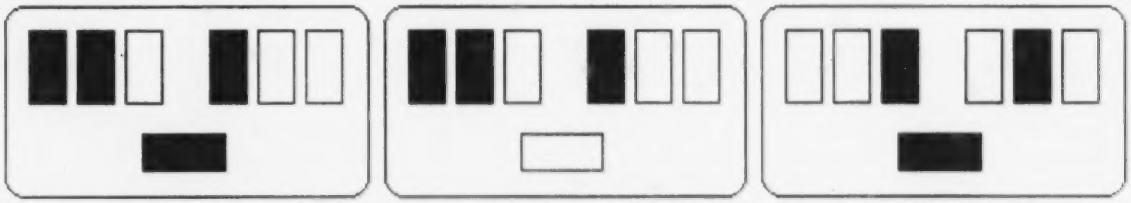
**s** chord **L** = Loads a file from diskdrive to Braille 'n Speak.

**Note #1:** First create an empty file in Braille 'n Speak, this will be used to deposit the information that you are sending from the disk drive.

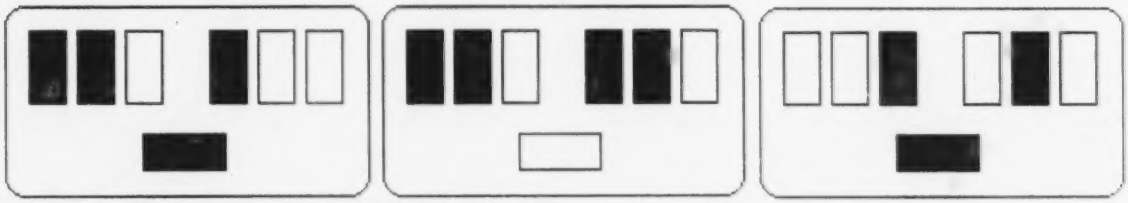
**Note #2:** You must be in this 'new' file before you load the file.



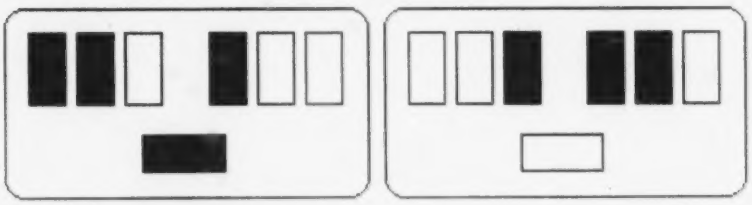
**s** chord **s** = Saves current file onto disk (Back up data to disk drive). Enter file name "_____" as you want it to appear on your disk (this file will remain in your Braille 'n Speak). **e** chord to start.



**s** chord **t** = Saves current file on disk as if printed. Enter file name "_____" as you want it to appear on your disk (this file will remain in your Braille 'n Speak). **e** chord to start.

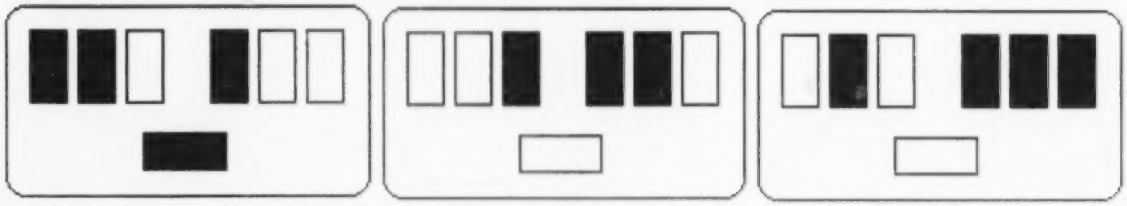


**s** chord **d** = Directory on diskdrive.

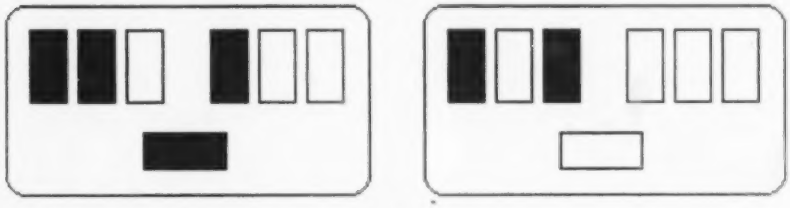


# Disk Drive Commands Continued

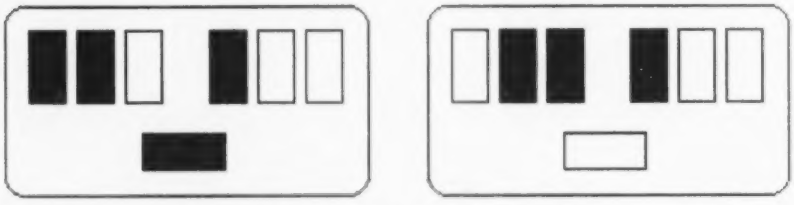
**s** chord **d/w** = Directory on diskdrive with time & date.



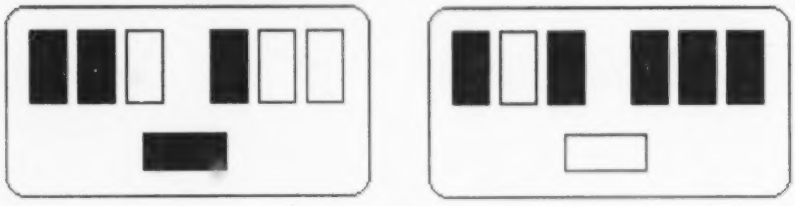
**s** chord **k** = Deletes file from disk.



**s** chord **f** = Formats new disks.



**s** chord **y** = Block transfer of information.

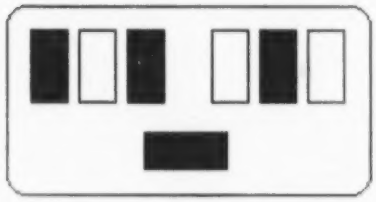


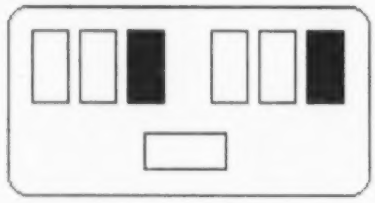
# Spell Checker

**Note:** Dictionary file supplied on the disk that came with Braille 'n Speak.

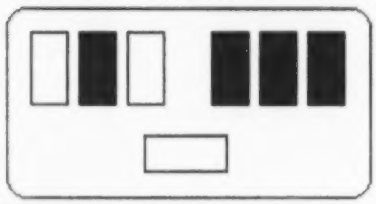
To turn on the **'Spell Check'** enter the following:

**o** chord followed by dot **1,6** (ch sign) = 'Spell check what?"



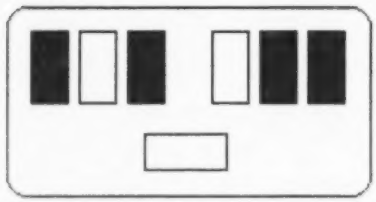


enter **w** = check current word



**Note:** If the word is correct it will say **"ok"**. If it is incorrect it will say **"not correct"** - it will then read and spell the incorrect word.

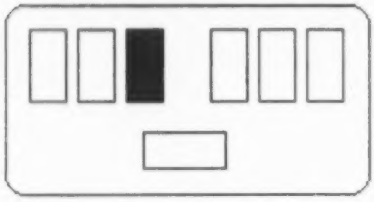
enter **z** = check entire document



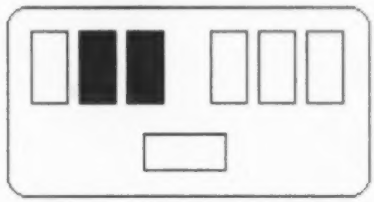
**Note:** Braille 'n Speak will say "enter a, b, c, e, o, r, s, or h" (for help) These are the **'Spell Check Options'**.

## Spell Check Options

**a** = "add" word to dictionary

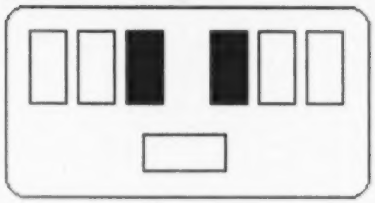


**b** = "bypass" word

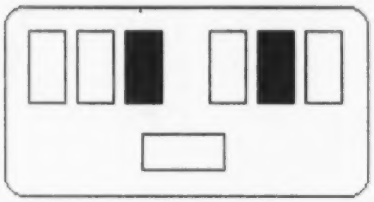


# Spell Checker Continued

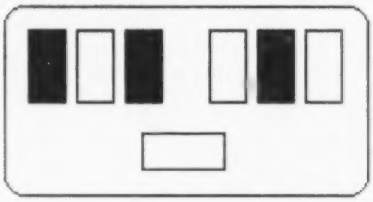
**c** = reads word in context (the current line that the word is on)



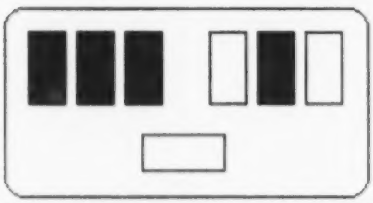
**e** = "enter" correct word



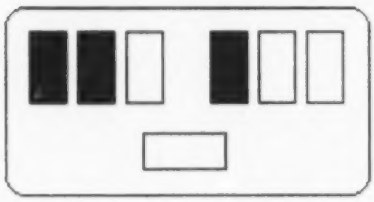
**o** = "ok, skip word" (move to next word)



**r** = "repeats" the misspelled word (dot 3,6 chord) spells it phonetically.



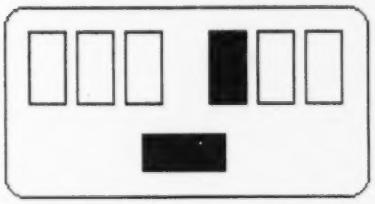
**s** = "suggestions" choices of words



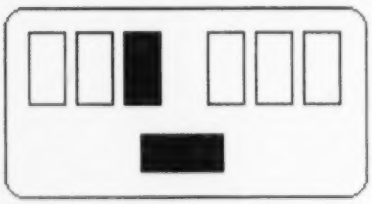
# Spell Checker Continued

## Movement within 'Suggestions'

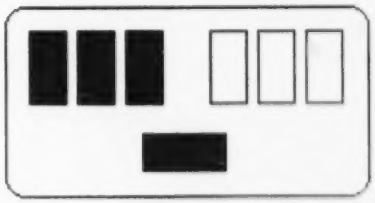
**dot 4** chord = move down in list



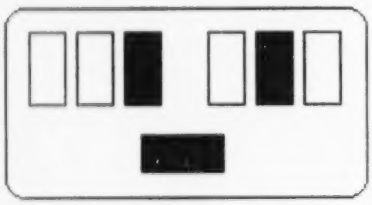
**dot 1** chord = move up in list



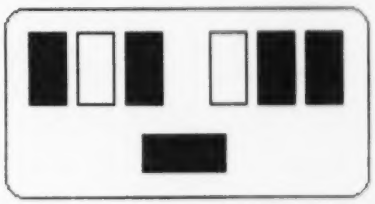
**L** chord = top/bottom of list



**e** chord to make your selection



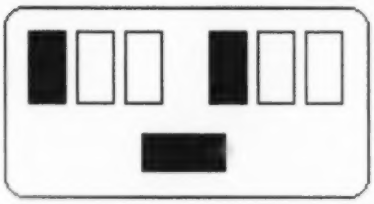
**z** chord = exit choices



# Status Menu

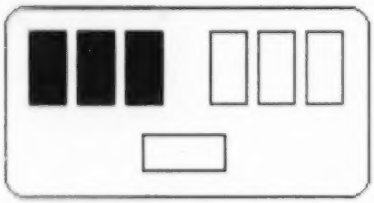
The Status Menu will give you a report on the Braille 'n Speak. What is on or off and the different functions that have been selected.

**st** chord = "Status Menu"

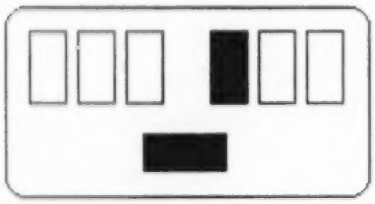


## Use the following keys for movement within the Status Menu.

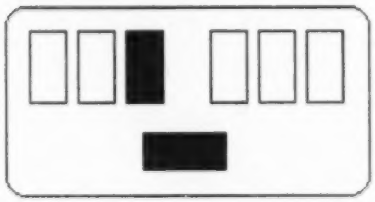
The **L** chord brings you to the top of the Status Menu.



**dot 4** chord = move to next selection.

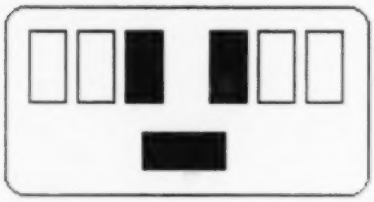


**a** chord = move backwards in the Status Menu.

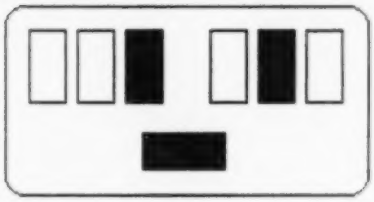


# Status Menu Continued

**c** chord = reads the line that you are currently on.



**e** chord = exit Status Menu



Refer to **'Getting Started: A Teacher's Guide To Braille 'n Speak'** page 36 - 42.

The information provided in the **'Braille 'n Speak 'Quick Reference Guide'** page 10 & 11 (Status Menu Default Settings) is also useful.
Note: The letters in the brackets will take you directly to that specific line location within the Status Menu. For example if you require the baud rate selection type in the letter (b) and you will jump to that line in the Status Menu.

Once the Braille 'n Speak has been formatted you don't have to use the 'Status Menu' very often. You might wish to contact a 'knowledgeable computer person' to assist you with such things as baud rates and handshaking.

# Creating Macros

## What are Macros

Macros are a series of recorded keystrokes and commands which are assigned to a specific key. When that key is selected it will carry out the prerecorded instructons.

## What Types of Macro Should I Create?

Suggestions:

1. Macros can be created so that the Braille 'n Speak will speak the **time and date when turned on**.

2. A macro can be used to create a **letterhead** which is ready for data entry.

3. A series of **printing** procedures can be recorded into a macro so that switching between print and braille printers will not require modifications to the Status Menu each time.

Creating Macros with the Braille 'n Speak is much like using a tape recorder. What ever actions are carried out between the beginning '**n** chord' and the ending '**n** chord' will be remembered and stored in the macro memory.

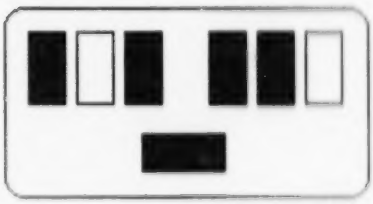
## Creating a macro

How to make the Braille 'n Speak say the time and date when it is turned on.

**Note:** The space bar key is reserved for macros that will automatically start when the Braille 'n Speak is turned on.

## Step #1

**n** chord = Start recording macro.

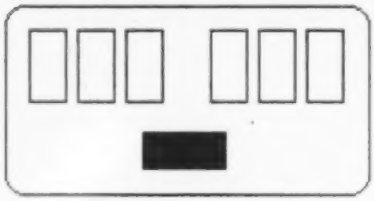


# Creating Macros Continued

## Step #2

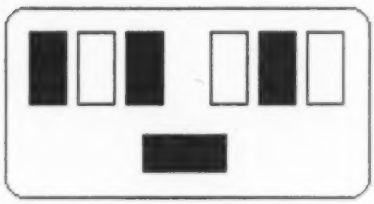
**What do you want to call your macro?**

Normally you would select **one letter** that relates to the macro you're creating e.g. the letter 'L' for letterhead but for a macro that automatically starts when the Braille 'n Speak is turned on you must use the **space bar**.



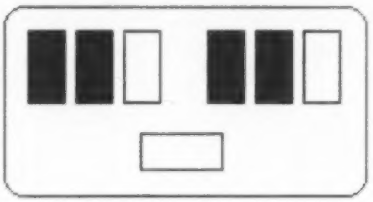
## Step #3

**o** chord = "option"



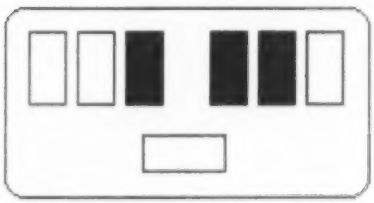
## Step #4

**t** = "The time is ....."



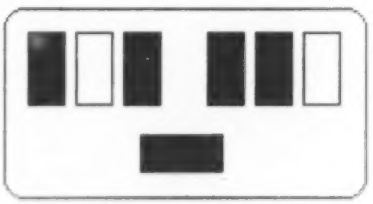
## Step #5

**d** = "Today is ....."



## Step #6

**n** chord = Stop recording macro.



## Step #6

**Turn** your Braille 'n Speak **off** and wait 3 seconds.

## Step #7

**Turn** your Braille 'n Speak back **on** and it should now tell you the time and date.

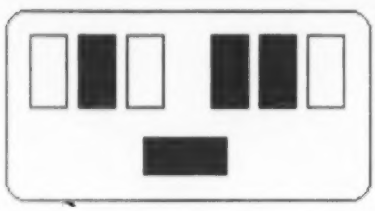
## Creating Macros Continued

Try creating other macros using the previous steps. The Braille 'n Speak remembers everything that happens while you are recording a macro and will go through the same sequence when you activate the macro.

## Using a Macro

**Note:** This applies to all macros except the space bar macro that you have just developed as this is automatically activated on startup.

**J** chord = open the 'using a macro' application



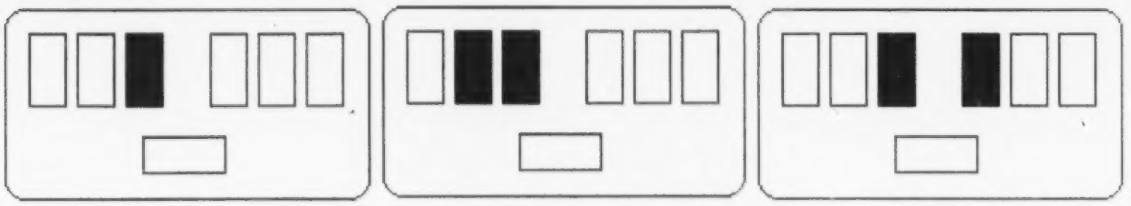
Now enter the **'macro key'** for the required macro. Select **one letter** that relates to the macro you're creating e.g. the letter 'B' for 'Braille Printer'.

## Erasing a Macro

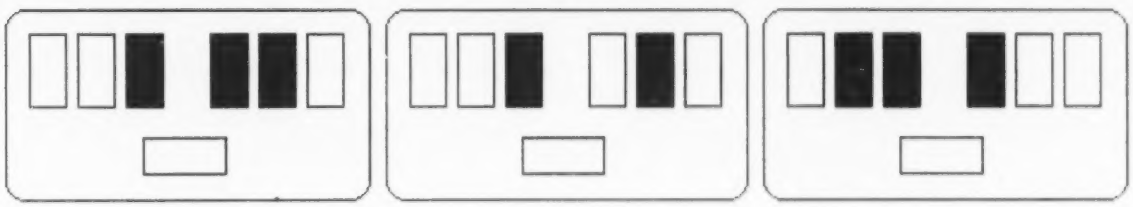
To erase a macro enter **n** chord, 'macro key', **n** chord.

# Braille Alphabet

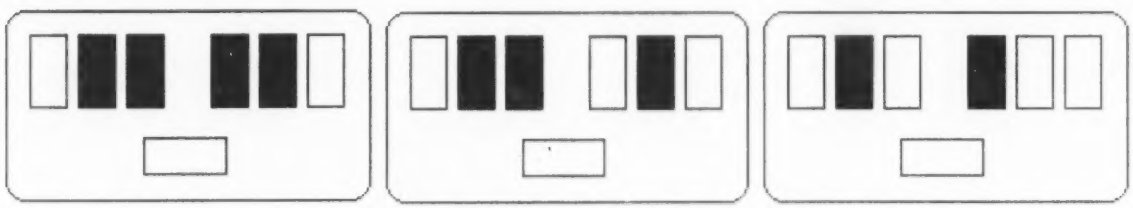
**Note:** To chord any keys press the space bar at the same time as the braille key.



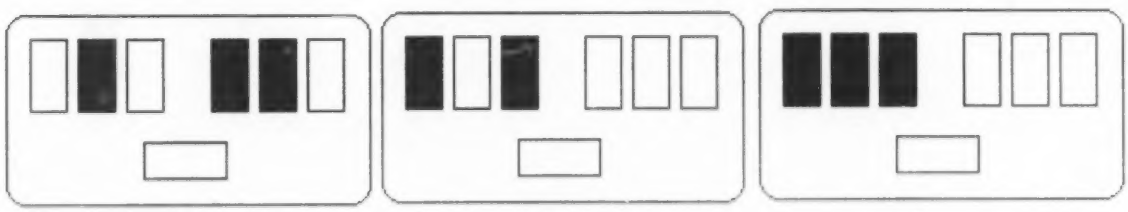
a b c



d e f

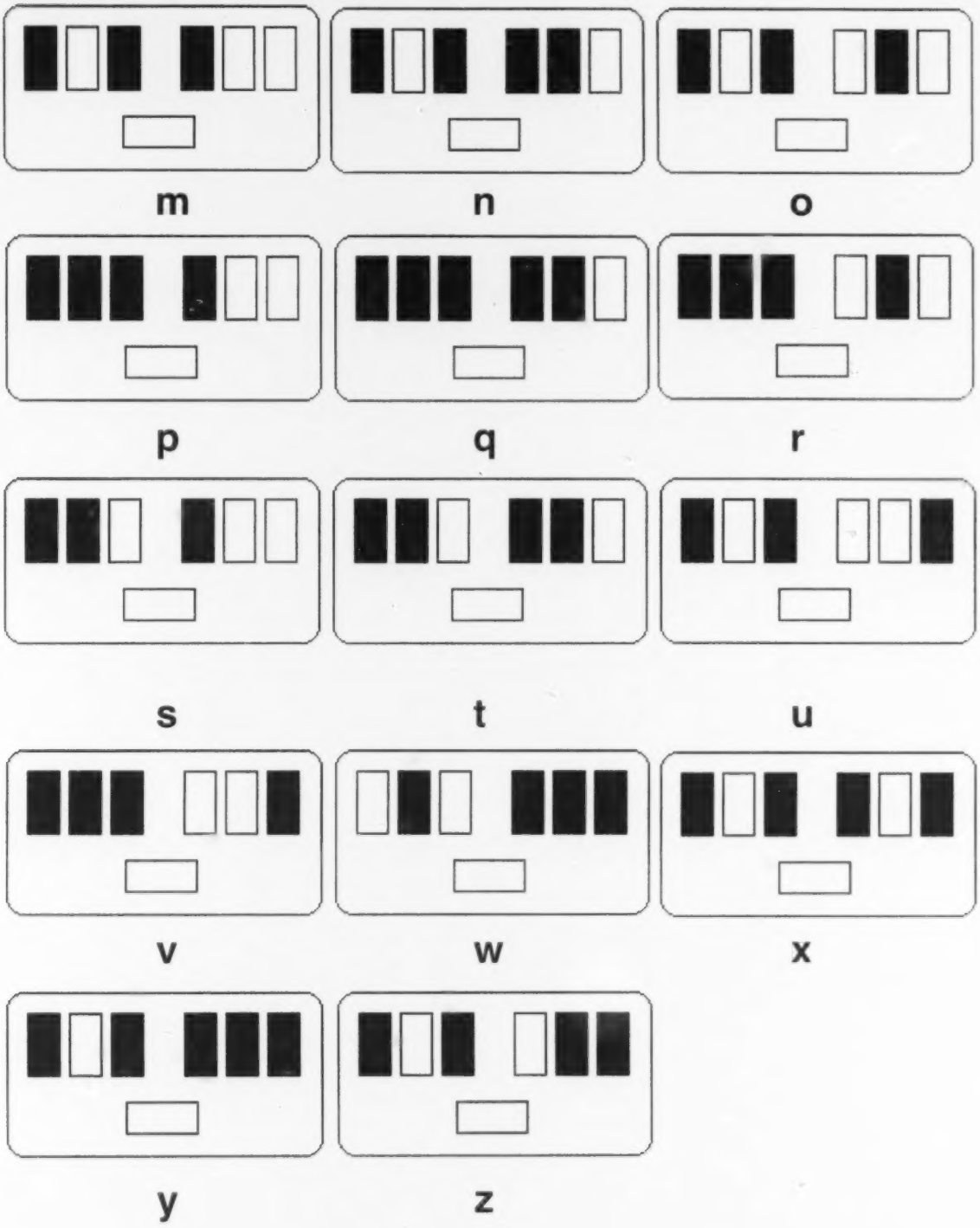


g h i

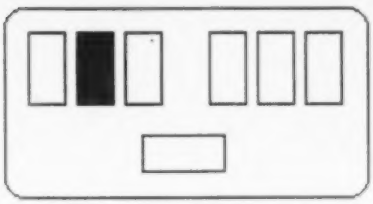


j k l

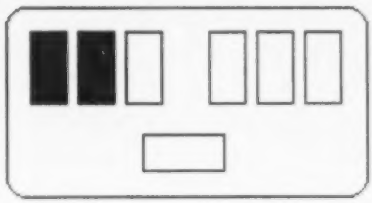
## Braille Alphabet Continued



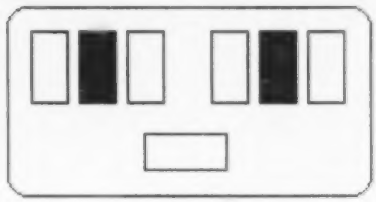
# Nemeth Code Numbers
## Braille 'n Speak



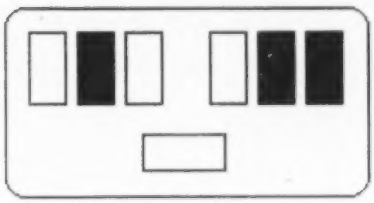
1



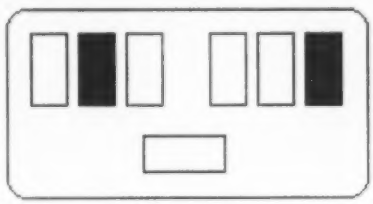
2



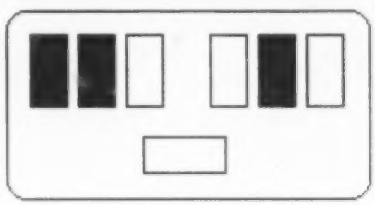
3



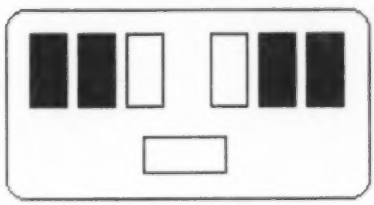
4



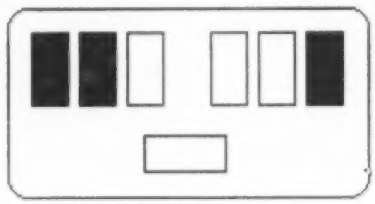
5



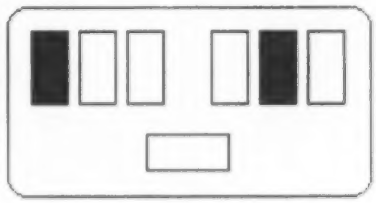
6



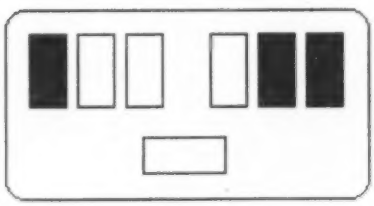
7



8



9



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# International Phonetic Alphabet

| | | | |
|---|---|---|---|
| A | Alpha | N | November |
| B | Bravo | O | Oscar |
| C | Charlie | P | Papa |
| D | Delta | Q | Quebec |
| E | Echo | R | Romeo |
| F | Foxtrot | S | Sierra |
| G | Gulf | T | Tango |
| H | Hotel | U | Uniform |
| I | India | V | Victor |
| J | Juliette | W | Whiskey |
| K | Kilo | X | Xray |
| L | Lima | Y | Yankee |
| M | Mike | Z | Zulu |